UNITED STATES AIR FORCE

OCCUPATIONAL SURVEY REPORT

PRECISION MANAGEMENT EQUIPMENT LABORATORY

AFSC 2P0X1

AFPT 90-2P0-072

SEPTEMBER 1996

OCCUPATIONAL MEASUREMENT SQUADRON
AIR FORCE OCCUPATIONAL MEASUREMENT SQUADRON
AIR EDUCATION AND TRAINING COMMAND
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60 CRS/LGMD (110 W STREET, BUILDING 942, TRAVIS AFB CA 94535-2546, ATTENTION: MSGT MCGOWN)	1				
81 TRG/CCVT (825 HERCULES STREET, STE 101, KEESLER AFB MS 39534-2037)	1		1		
336 TRS/TTMZT (709 MEADOWS DRIVE, ROOM 122, KEESLER AFB MS 39534-2480)	3	1	3	3	3

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PREFACE

This report presents the results of a detailed Air Force Occupational Survey of the Precision Measurement Equipment Laboratory career ladder (AFSC 2P0X1). Authority for conducting occupational surveys is contained in AFI 36-2623. Computer products upon which this report is based are available for the use of operations and training officials.

The survey instrument was developed by 1Lt Jeffrey W. Voetberg, Inventory Development Specialist, with computer programming support furnished by Mr. Wayne J. Frugé and Ms. Rebecca R. Hernandez. Mr. Richard G. Ramos provided administrative support. Lt Voetberg, Occupational Analyst, analyzed the data and wrote the final report. This report has been reviewed and approved by Mr. Daniel E. Dreher, Chief, Airman Analysis Section, Occupational Analysis Flight, Air Force Occupational Measurement Squadron (AFOMS).

Copies of this report are distributed to Air Staff sections, major commands, and other interested training and management personnel. Additional copies are available upon request to AFOMS, Attention: Chief, Occupational Analysis Flight (OMY), Randolph AFB Texas 78150-4449 (DSN 487-6623).

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SUMMARY OF RESULTS

1. *Survey Coverage*: The Precision Measurement Equipment Laboratory career ladder was surveyed to evaluate changes in the 2P0X1 career ladder and to obtain current task and equipment data for use in evaluating current training programs. One-hundred percent of eligible specialty members were selected as participants. Results are based on responses from 1,142 respondents (82 percent of the total personnel selected for survey). All major using commands are satisfactorily represented in the survey sample.

2. *Specialty Jobs*: Nine clusters and six independent jobs (IJ) were identified in the career ladder structure analysis. All but two clusters and one of the IJs involve the day-to-day technical responsibilities of the specialty. The remaining clusters and job can be categorized as training, staff, or support functions. The technical jobs are quite distinct from each other, yet there is a core of tasks common to most incumbents. The AFMAN 36-2108 *Specialty Description* is complete and generally portrays the nature of the job.

3. *Career Ladder Progression*: Three-skill level personnel devote nearly all their time to technical activities. The 5-skill level jobs were also technically oriented, but, in addition, have a supervisory aspect. Seven-skill level personnel devote a large majority of their time to supervisory and management activities. The few 9-skill level and CEM personnel are generally involved in senior management activities.

4. *Training Analysis*: Analysis of the Specialty Training Standard (STS) identified a few areas which were not well supported by the data. These shortcomings remained even after using jobs and clusters as criterion groups. There were also some tasks with high percent members performing which were not referenced in the STS. The Plan of Instruction (POI) also had some shortcomings, although those areas were supported when percent members performing in the job groups were used as the criteria. There were more tasks not referenced to the POI, though most were general tasks.

5. *Job Satisfaction Analysis*: The job satisfaction measures for the survey sample were generally high. This group of incumbents is about as satisfied as the previous samples and a comparative sample. As might be expected, reenlistment intentions were lower for the first-term personnel, but higher for the more senior members of the career ladder. Satisfaction was consistent across all but one of the jobs. This job is similar to the others in most aspects, and this lower satisfaction is somewhat surprising. Members of two other jobs which do not involve much equipment expressed lower use of training.

6. *Implications*: The career ladder structure is very similar to that found in the previous occupational survey report. Career ladder progression is normal, showing a movement away from the technical tasks common at the lower skill levels as the incumbents move toward the 7- and 9-skill levels. Training documents are generally supported, with a few areas in need of review. Job satisfaction is at or near its historic level.

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OCCUPATIONAL SURVEY REPORT (OSR)
PRECISION MEASUREMENT EQUIPMENT LABORATORY CAREER LADDER
(AFSC 2P0X1)

INTRODUCTION

This is a report of an occupational survey of the Precision Measurement Equipment Laboratory (PMEL) career ladder conducted by the Occupational Analysis Flight, Air Force Occupational Measurement Squadron. The survey was conducted to obtain current job and task data. Data collected through this OSR will be utilized by training development personnel to review courses and related training documents in light of equipment and utilization changes which have occurred since the last OSR. The career ladder was last surveyed as AFSC 324X0. The results are summarized in an OSR dated November 1990.

Background

As described in the AFMAN 36-2108 *Specialty Description* for AFSC 2P0X1, dated 31 October 1994, members: inspect, align, and troubleshoot malfunctions in test, measurement, and diagnostic equipment (TMDE), including laboratory standards, and manual and automatic test equipment; inspect TMDE for preventive maintenance, cleanliness, and safety requirements; analyze routine, complex, and unusual maintenance problems in TMDE; use theories of operation, block diagrams, schematics, logic trees, and software diagnostics; trace circuits and isolate malfunctions to component level in complex TMDE; calibrate and certify TMDE to technical data specifications; prepare reports and verify maintenance data collection; plan and organize laboratory activities; coordinate TMDE mission support requirements; identify scheduled mission essential TMDE and its impact on workload; and develop and evaluate workload plans, budgets, and interservice and interdepartmental support agreements.

All members are required to attend course E3AQR2P031-000, Precision Measurement Equipment Laboratory Apprentice. The course, offered at Keesler AFB, is 80 days long. Members also attend the Air Force follow-on course E3ABR2P031-009, which is 13 days long. There are numerous 5-skill level courses offered.

Entry into the career ladder currently requires an Armed Forces Vocational Aptitude Battery minimum score of 67 Electronic, and the strength factor of J (weight lift of 60 lbs) must be met or exceeded.

AFSC 2P0X1 members work in several types of PMELs:

Type I.

The highest echelon standards laboratory. It maintains Air Force measurement standards certified by the National Bureau of Standards, the US Naval Observatory, or other nationally recognized standards. The only Type I PMEL in the Air Force is located at Newark AFS OH. It is staffed primarily by civilians.

Type IIA.

These base-level PMELs provide support to air logistics centers and designated geographical areas. These PMELs are operated by AFMC and theater support commands. They are referred to as depot labs. There are only three Type IIA PMELs with military personnel: Bitburg AB GE; Elmendorf AFB AK; and Kadena AB JA.

Type IIB.

This is the common base PMEL. These labs support aircraft, missiles, ground systems, and other equipment on base or in a geographic area.

Type IIC.

These labs provide support research, development, testing, and evaluation programs.

Type IID.

This type PMEL is designed to satisfy a specific mission and normally receives support from a Type I lab. The only Type IID lab is at Newark AFS and has no military personnel assigned.

Type III.

This is a limited lab at a detached location, such as an Air Force Station. This type PMEL is designed to satisfy a specific mission and normally receives support from a Type II PMEL. A Type III lab is not authorized at an installation where a Type II lab exists. Type III PMELs are staffed by civilian personnel.

Type IV.

These labs support a specific weapon system, either the F-15 or F-16, through the use of transportable measurement system. The Type IV PMELs receive support from a Type II PMEL, and may be co-located with a type II lab.

In addition, there is a wide variety of TMDE supported. Most specialization is by type of equipment worked on, or "K" areas. The letter K is derived from a letter used in the alpha-numeric designators for the Technical Orders which prescribe most of the procedures for TMDE. There are 9 "K" areas:

K1/K2	Voltage, current, and impedance equipment
K3	Frequency generating and waveform analyzing equipment
K4	Microwave equipment
K5/K6	Electromechanical and dimensional equipment
K7	Radiac equipment
K8	Electrical measurement consoles and equipment
K9	Automatic test equipment

Most of the Type IIB labs deal with the K1/K2, K3, K5/K6, or K8 areas. Type IV PMELs do not have K6 or K7 areas. The recent trend is to consolidate the Type IIB and the Type IV labs when both exist on the same base.

SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory (JI) AFPT 90-2P0-072, dated August 1995. The Inventory Developer prepared a tentative task list by reviewing pertinent career ladder publications, directives, and the previous JI and OSR. This task list was further refined and validated through personal interviews with 45 subject-matter experts representing a variety of major commands (MAJCOMs) at the following locations:

BASE	UNIT
Keesler AFB	336 TRS
Travis AFB	60 CRS
Randolph AFB	12 MXS
Tyndall AFB	325 MXS
Eglin AFB	46 CRS 33 FW
Shaw AFB	20 CRS
Seymour-Johnson AFB	4 CRS

The resulting JI contained a comprehensive listing of 1,226 tasks grouped under 24 duty headings with a background section requesting such information as grade, MAJCOM, job title, time in present job, time in service, job satisfaction, functional area, type of lab, organizational level, training completed, and equipment and forms used.

Survey Administration

Base Training Offices at operational bases worldwide administered the inventory to 1,389 DAFSC 2P0X1 personnel holding a 3-, 5-, 7-, 9-, or CEM-skill level. Personnel excluded from taking the survey comprised the following: (1) hospitalized personnel; (2) personnel in transition for a permanent change of station; (3) personnel retiring during the time inventories were administered to the field; and (4) personnel in their job less than 6 weeks. Participants were selected from a computer-generated mailing list obtained from personnel data tapes maintained by the Air Force Personnel Center, Randolph AFB TX.

Each individual who completed the inventory first filled in an identification and biographical information section and then checked each task performed in the member's current job. After checking all tasks performed, respondents then rated each task on a 9-point scale showing relative time spent on that task, as compared to all other tasks checked. The ratings ranged from 1 (very small amount time spent) through 5 (about average time spent) to 9 (very large amount spent).

To determine relative time spent for each task checked by a respondent, all of the incumbent's ratings are assumed to account for 100 percent of the member's time spent on the job. First, the ratings are summed. Each task rating is then divided by the sum of task ratings and multiplied by 100 to provide a relative percentage of time for each task. This procedure provides a basis for comparing tasks in terms of both percent members performing and average percent time spent.

Survey Sample

The final AFSC 2P0X1 survey sample includes responses from 1,142 job incumbents. Table 1 reflects the distribution, by MAJCOM, of assigned AFSC 2P0X1 personnel. As of 23 October 1995 there were 1,512 members assigned to the career ladder. One-hundred percent of those eligible were selected for participation in the survey. The 1,142 respondents represent 76 percent of the assigned population, and 82 percent of those surveyed. Table 2 reflects the distribution by paygrade. The survey sample is fairly even across paygrades and is a good reflection of the assigned population.

TABLE 1

MAJCOM REPRESENTATION OF SURVEY SAMPLE

MAJCOM	PERCENT OF ASSIGNED*	PERCENT OF SAMPLE
ACC	31	32
PACAF	19	20
USAFE	16	15
AETC	11	11
AMC	11	11
AFMC	10	10
OTHER	3	1

TOTAL ASSIGNED = 1,512
TOTAL SURVEYED = 1,389
TOTAL IN SAMPLE = 1,142
PERCENT OF ASSIGNED IN SAMPLE = 76%
PERCENT OF SURVEYED IN SAMPLE = 82%

* As of October 1995
NOTE: Columns may not add to 100 percent due to rounding

TABLE 2

PAYGRADE DISTRIBUTION OF SAMPLE

PAYGRADE	PERCENT OF ASSIGNED*	PERCENT OF SAMPLE
E-1 TO E-3	7	7
E-4	37	35
E-5	30	32
E-6	14	14
E-7	10	9
E-8	2	2
E-9	1	1

* As of October 1995
NOTE: Columns may not add to 100 percent due to rounding

Task Factor Administration

Job descriptions alone do not provide sufficient data for making decisions about career ladder documents or training programs. Task factor information is needed for a complete analysis of the career ladder. To obtain the needed task factor data, selected senior AFSC 2P0X1 personnel (generally E-6 or E-7 craftsmen) also completed a second booklet for either training emphasis (TE) or task difficulty (TD). These booklets were processed separately from the JIs. This information is used in a number of different analyses discussed in more detail within the report.

Training Emphasis (TE). TE is a rating of the amount of emphasis that should be placed on tasks in entry-level training. The 80 senior AFSC 2P0X1 NCOs who completed the TE booklet were asked to select tasks they felt required some sort of structured training for entry-level personnel, and then indicate how much training emphasis these tasks should receive, from 1 (extremely low emphasis) to 9 (extremely high emphasis). Structured training is defined as training provided by resident technical schools, field training detachments, mobile training teams, formal on-the-job training (OJT), or any other organized training method. There was acceptable agreement among the 80 raters. The average TE rating was 1.23, with a standard deviation of 1.33. Any task with a TE rating of 2.56 or above is considered to have high TE.

Task Difficulty (TD). Task difficulty is an estimate of the amount of time the average airman needs to learn to perform a task satisfactorily. The 73 senior NCOs who completed TD booklets were asked to rate the difficulty of each task using a 9-point scale (from extremely low to extremely high). Interrater reliability was calculated and found acceptable. Ratings were standardized so tasks have an average difficulty rating of 5.00, with a standard deviation of 1.00. Any task with a TD rating of 6.00 or above is considered to be difficult to learn.

To help training personnel focus on tasks which are most appropriate for entry-level training, an additional factor, the Automated Training Indicator (ATI), was assigned to each task in the inventory. A computer program considered percent first-enlistment members performing, TE and TD ratings, and the Course Training Decision Table found in Air Education and Training Command Instruction 36-2601, Atch 2, to assign the value to each tasks corresponding to the 18 training decisions on the table. The decision table and the explanation of ATIs precede the listing of tasks in descending order of ATI in the Training Extract. Training personnel should focus on tasks with an ATI of 18, which suggest these tasks should be in the entry-level course.

When used in conjunction with the primary criterion of percent members performing, Task factor ratings can provide insight into first-enlistment personnel training requirements. Such insights may suggest a need for lengthening or shortening portions of instruction supporting AFSC entry-level jobs.

SPECIALTY JOBS
(Career Ladder Structure)

Each Air Force occupational analysis begins with an examination of the career ladder structure. The structure of jobs within the PMEL career ladder was examined on the basis of similarity of tasks performed and the percent of time spent ratings provided by job incumbents, independent of other specialty background factors.

Each individual in the sample performs a set of tasks called a *Job*. A hierarchical grouping program, which is a basic part of the Comprehensive Occupational Data Analysis Program (CODAP) system, creates an individual job description for each respondent (all the tasks performed by that individual and the relative amount of time spent on those tasks). It then compares each job description to every other job description in terms of tasks performed and the relative amount of time spent on each task in the JI. The automated system locates the two job descriptions with the most similar tasks and percent time ratings and combines them to form a composite job description. In successive stages, the system adds new members to the initial group or forms new groups based on the similarity of tasks performed and similar time ratings in the individual job descriptions.

When there is a substantial degree of similarity between jobs, they are grouped together and identified as a *Cluster*. The job structure resulting from this grouping process (the various jobs and clusters within the career ladder) can be used to evaluate the accuracy of career ladder documents (Career Field Education and Training Plans (CFETP), AFMAN 36-2108 *Specialty Description*, and Specialty Training Standards (STS)), and to gain a better understanding of current utilization patterns.

Overview of Specialty Jobs

Based on the similarity of tasks performed and the amount of time spent performing each task, 9 clusters and 6 jobs were identified within the AFSC 2P0X1 survey sample. A listing of these is provided below and illustrated in Figure 1. The stage (STG) number shown beside each title references computer-generated information; the letter "N" stands for the number of personnel in each group.

I. TACAN AND IFF EQUIPMENT JOB (STG220, N=7)

II. VOLTAGE, CURRENT, AND RESISTANCE EQUIPMENT JOB (STG167, N=67)

III. ELECTRICAL MEASUREMENT CONSOLES JOB (STG179, N=85)

IV. FREQUENCY GENERATING AND WAVEFORM ANALYZING EQUIPMENT CLUSTER (STG069, N=317)

AFSC 2P0X1 SPECIALTY JOBS
(N=1,142)

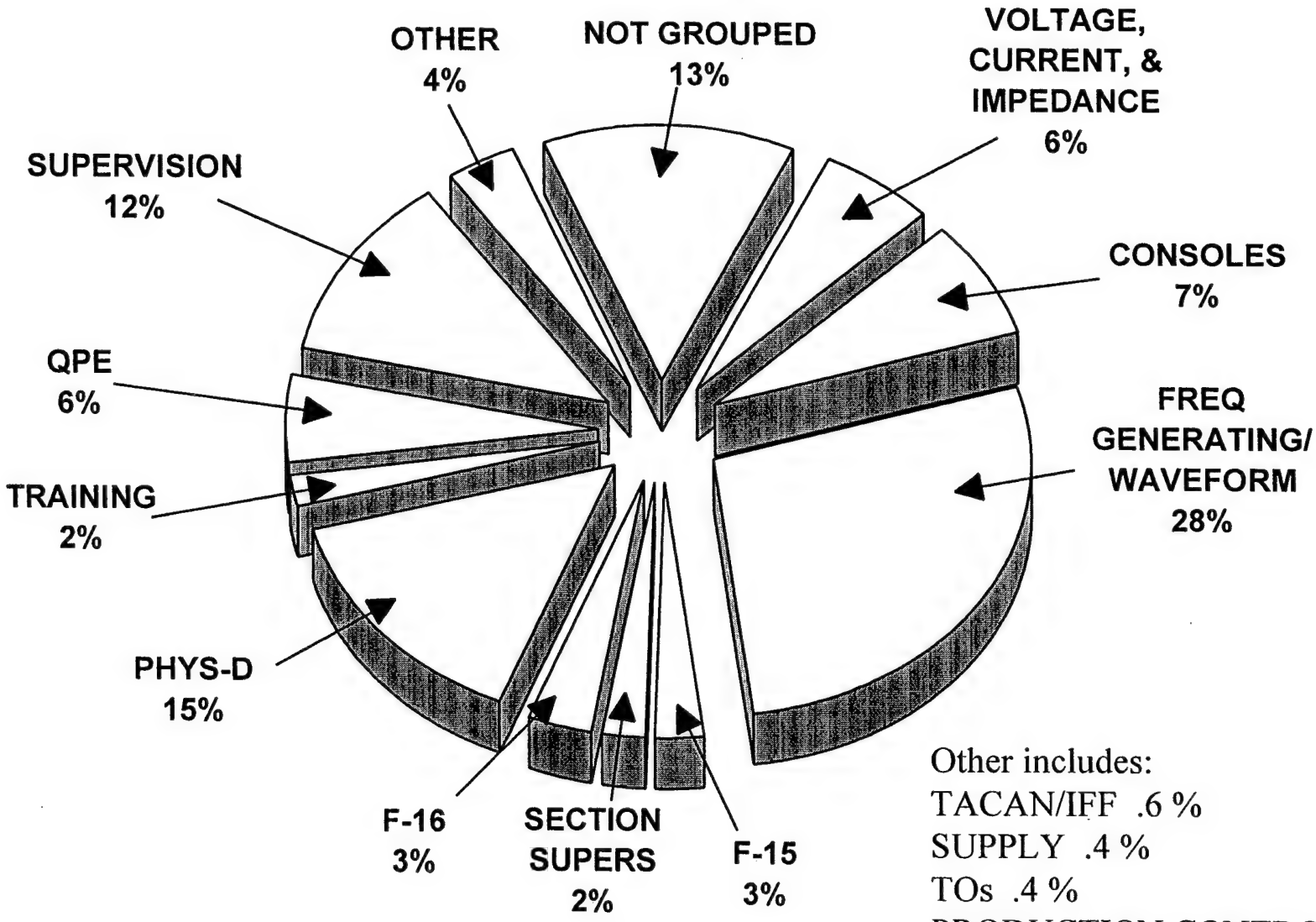


FIGURE 1

Other includes:
TACAN/IFF .6 %
SUPPLY .4 %
TOs .4 %
PRODUCTION CONTROL 1%
PAMS 1 %

V. QUALITY PROCESS EVALUATOR CLUSTER (GP036, N=64)

VI. F-15 UNIQUE EQUIPMENT MAINTENANCE CLUSTER (STG114, N=30)

VII. SECTION SUPERVISOR CLUSTER (STG086, N=25)

VIII. F-16 UNIQUE EQUIPMENT MAINTENANCE CLUSTER (STG072, N=37)

IX. PHYSICAL AND DIMENSIONAL EQUIPMENT CLUSTER (STG087, N=170)

X. TRAINING CLUSTER (STG096, N=20)

XI. SUPPLY JOB (STG279, N=5)

XII. SUPERVISION CLUSTER (STG074, N=136)

XIII. TECHNICAL ORDER JOB (STG151, N=5)

XIV. PRODUCTION CONTROL CLUSTER (STG057, N=13)

XV. PMEL AUTOMATED MAINTENANCE SUBSYSTEM (PAMS) JOB (STG218, N=12)

The respondents forming these groups account for 87 percent of the survey sample. The remaining 13 percent are performing tasks or a series of tasks which do not group with any of the defined jobs. Some job titles for these individuals include: PMEL Technician, NCOIC Gold Disk Development, Mobility Logistics, Logistics Liaison, and Building Shelter Manager.

Group Descriptions

The following paragraphs contain brief descriptions of the jobs identified through the career ladder structure analysis. Also presented are two tables which reflect the time incumbents spend on duties and selected background data for each group. Table 3 presents the relative time spent by respondents in each job across each duty listed in the JI. Table 4 displays selected background information, such as DAFSC distributions across each group, average of total months in active military service (i.e., Total Active Federal Military Service (TAFMS)), and average number of tasks performed. Appendix A at the back of this OSR lists representative tasks performed by members of each group.

Another way to illustrate these jobs is to summarize tasks performed into groups of tasks (task modules (TMs)). This allows for a very concise display of where job incumbents spend most of their time and develops a comprehensive overview of each job. Each job or cluster

TABLE 3

AVERAGE PERCENT TIME SPENT ON DUTIES BY AFSC 2P0X1 JOB GROUPS
(RELATIVE PERCENT OF JOB TIME)

	TACAN/ IFF (STG220)	VOLT, CURRENT RESISTANCE (STG167)	ELECTRIC CONSOLES (STG179)	FREQ GEN & WAVEFRM (STG069)	QPE (GP036)
A ORGANIZING AND PLANNING	*	*	1	1	3
B DIRECTING AND IMPLEMENTING	*	*	2	2	4
C EVALUATING AND INSPECTING	*	*	2	2	7
D TRAINING	1	*	3	2	4
E PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL DATA ACTIVITIES	*	1	2	2	3
F PERFORMING SUPPLY AND EQUIPMENT ACTIVITIES	10	5	5	5	3
G PERFORMING QUALITY ASSURANCE TASKS	2	*	*	*	6
H PERFORMING PRODUCTION CONTROL TASKS	2	*	*	*	*
I PERFORMING PMEL AUTOMATED MANAGEMENT SUBSYSTEM (PAMS) TASKS	*	*	*	*	1
J PERFORMING GENERAL PMEL MAINTENANCE TASKS	20	20	10	13	5
K PERFORMING METROLOGY COMPUTATIONS AND ANALYSIS	22	11	8	12	8
L MAINTAINING VOLTAGE, CURRENT, AND IMPEDANCE EQUIPMENT (K1 AND K2)	*	33	16	4	6
M MAINTAINING FREQUENCY GENERATING AND MEASURING EQUIPMENT (K3)	7	2	3	19	9
N MAINTAINING WAVEFORM ANALYZING EQUIPMENT (K3)	6	2	2	12	6
O MAINTAINING MICROWAVE EQUIPMENT (K4)	4	*	*	10	6
P MAINTAINING ELECTROMECHANICAL AND DIMENSIONAL EQUIPMENT (K5 & K6)	*	4	1	3	13
Q MAINTAINING OPTICAL EQUIPMENT (K6)	*	*	*	*	2
R MAINTAINING RADIAC EQUIPMENT (K7)	*	*	*	*	1
S MAINTAINING ELECTRICAL MEASUREMENT CONSOLES AND EQUIPMENT (K8)	*	12	35	2	6
T MAINTAINING AND OPERATING AUTOMATIC TEST EQUIPMENT	*	*	*	2	1
U MAINTAINING SPECIAL TEST EQUIPMENT	25	2	3	4	4
V MAINTAINING F-15 UNIQUE WEAPONS SYSTEM PRECISION MEASUREMENT EQUIPMENT (PME)	*	*	1	1	*
W MAINTAINING F-15E UNIQUE WEAPONS SYSTEM PME	*	*	*	*	*
X MAINTAINING F-16 UNIQUE WEAPONS SYSTEM PME	*	*	*	*	*

* Less than 1 percent

NOTE: Columns may not add to 100 percent due to rounding

TABLE 3 (CONTINUED)

AVERAGE PERCENT TIME SPENT ON DUTIES BY AFSC 2P0X1 JOB GROUPS
(RELATIVE PERCENT OF JOB TIME)

		F-15 UNIQUE (STG114)	SECTION SUPERVISOR (STG086)	F-16 UNIQUE (STG072)	PHYSICAL-DIMENSINL (STG087)	TRAINING (STG096)
A	ORGANIZING AND PLANNING	2	4	2	2	4
B	DIRECTING AND IMPLEMENTING	2	8	2	2	4
C	EVALUATING AND INSPECTING	3	9	3	3	5
D	TRAINING	3	8	3	3	41
E	PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL DATA ACTIVITIES	2	4	3	1	4
F	PERFORMING SUPPLY AND EQUIPMENT ACTIVITIES	4	9	6	5	10
G	PERFORMING QUALITY ASSURANCE TASKS	*	1	1	*	*
H	PERFORMING PRODUCTION CONTROL TASKS	1	2	1	*	*
I	PERFORMING PMEL AUTOMATED MANAGEMENT SUBSYSTEM (PAMS) TASKS	*	*	1	*	*
J	PERFORMING GENERAL PMEL MAINTENANCE TASKS	9	18	14	10	3
K	PERFORMING METROLOGY COMPUTATIONS AND ANALYSIS	7	11	9	9	17
L	MAINTAINING VOLTAGE, CURRENT, AND IMPEDANCE EQUIPMENT (K1 AND K2)	3	5	5	2	*
M	MAINTAINING FREQUENCY GENERATING AND MEASURING EQUIPMENT (K3)	8	4	2	1	3
N	MAINTAINING WAVEFORM ANALYZING EQUIPMENT (K3)	6	10	2	*	*
O	MAINTAINING MICROWAVE EQUIPMENT (K4)	4	1		*	*
P	MAINTAINING ELECTROMECHANICAL AND DIMENSIONAL EQUIPMENT (K5 AND K6)	2	*	4	47	*
Q	MAINTAINING OPTICAL EQUIPMENT (K6)	*	*		5	*
R	MAINTAINING RADIAC EQUIPMENT (K7)	*	*		1	*
S	MAINTAINING ELECTRICAL MEASUREMENT CONSOLES AND EQUIPMENT (K8)	2	*		*	3
T	MAINTAINING AND OPERATING AUTOMATIC TEST EQUIPMENT	5	*	3	*	*
U	MAINTAINING SPECIAL TEST EQUIPMENT	7	2	9	5	2
V	MAINTAINING F-15 UNIQUE WEAPONS SYSTEM PRECISION MEASUREMENT EQUIPMENT (PME)	22	*	1	*	*
W	MAINTAINING F-15E UNIQUE WEAPONS SYSTEM PME	6	*		*	*
X	MAINTAINING F-16 UNIQUE WEAPONS SYSTEM PME	1	*	24	*	*

* Less than 1 percent

NOTE: Columns may not add to 100 percent due to rounding

TABLE 4

SELECTED BACKGROUND DATA FOR AFSC 2P0X1 CAREER LADDER JOBS

	TACAN/ IFF (STG220)	VOLT, CURRENT & RESISTANCE (STG167)	ELECTRICAL CONSOLES (STG179)	FREQ GEN & WAVEFORM (STG069)	QPE (GP036)
NUMBER IN GROUP	7	67	85	317	46
% OF SAMPLE	*	6	7	28	4
% IN CONUS	43	67	60	61	63
DAFSC % DISTRIBUTION:					
2P031		64	19	21	3
2P051	100	34	68	67	56
2P071		1	13	13	39
2P091					2
2P000					
PREDOMINANT PAYGRADE(S)	E-4	E-3/4	E-4/5	E-4	E-5
AVG MONTHS IN SERVICE (TAFMS)	73	44	96	92	145
% IN FIRST ENLISTMENT	0	68	25	31	2
AVG NUMBER OF TASKS PERFORMED	54	71	158	138	220
PERCENT SUPERVISING	14	12	42	34	61

* Less than 1 percent

TABLE 4 (CONTINUED)

SELECTED BACKGROUND DATA FOR AFSC 2P0X1 CAREER LADDER JOBS

	F-15 UNIQUE (STG114)	SECTION SUPERVISORS (STG086)	F-16 UNIQUE (STG072)	PHYSICAL-DIMENSIONAL (STG087)	TRAINING (STG096)
NUMBER IN GROUP	30	25	37	170	20
% OF SAMPLE	3	2	3	15	2
% IN CONUS	47	64	62	59	100
DAFSC % DISTRIBUTION:					
2P031			5	12	
2P051	87	60	89	78	70
2P071	13	40	5	9	30
2P091					
2P000					
PREDOMINANT PAYGRADE(S)	E-5	E-5	E-4/5	E-4/5	E-5
AVG MONTHS IN SERVICE (TAFMS)	116	134	104	106	131
% IN FIRST ENLISTMENT	10	4	14	18	0
AVG NUMBER OF TASKS PERFORMED	223	82	104	155	42
PERCENT SUPERVISING	67	76	27	43	30

* Less than 1 percent

TABLE 4 (CONTINUED)

SELECTED BACKGROUND DATA FOR AFSC 2P0X1 CAREER LADDER JOBS

	SUPPLY (STG279)	SUPERVISION (STG074)	TOs (STG151)	PRODUCTION CONTROL (STG057)	PAMS (STG218)
NUMBER IN GROUP	5	136	5	13	12
% OF SAMPLE	*	12	*	1	1
% IN CONUS	40	60	60	62	67
DAFSC % DISTRIBUTION:					
2P031		1	20	8	
2P051	20	7	80	69	58
2P071	80	79		23	42
2P091		9			
2P000		4			
PREDOMINANT PAYGRADE(S)	E-5/7	E-7	E-4	E-4	E-5
AVG MONTHS IN SERVICE (TAFMS)	173	211	87	104	175
% IN FIRST ENLISTMENT	0	1	20	23	0
AVG NUMBER OF TASKS PERFORMED	36	106	19	37	42
PERCENT SUPERVISING	40	100	20	23	50

* Less than 1 percent

description contains a display of related TMs. This display shows the number of tasks included in a module, the average percent time spent on that module, and an average percentage of members performing the tasks in that module. These modules were identified through CODAP coperformance clustering, which calculates the probability that members who perform one task will also perform a second task or group of related tasks. Representative TMs are listed as part of the job description. The list of TMs with representative tasks is presented in Appendix B.

I. TACAN AND IFF EQUIPMENT JOB (STG220, N=7). Incumbents in this specialized job perform an average of 54 tasks. These seven individuals are unique because of their specialization on IFF and navigational equipment Over 25 percent of their time is spent on tasks related to that equipment (see Table 3). Members are equally distributed across USAFE, PACAF, and ACC. All members described their primary work area as K3 TACAN or IFF. These relatively junior members average 73 months TAFMS and 71 percent hold the E-4 paygrade. Examples of tasks performed include:

- calibrate or align IFF or SIF transponder test sets
- troubleshoot or repair identification friend or foe (IFF) or selective identification feature (SIF) transponder test sets
- calibrate or align TACAN related test equipment, other than navigational test sets
- troubleshoot or repair TACAN related test equipment, other than navigational test sets
- calibrate or align airborne navigational aid test sets
- calibrate or align ILS/VOR test equipment

Representative TMs for this cluster include:

TM	Module Title	Number of Tasks	% Time Spent	% Members Performing
29	TACAN, IFF, & ILS/VOR Equipment	6	18	86
2	Calculations and Analysis	11	13	64
1	Basic Maintenance	9	12	73
3	Deficiency Reports & Supply Requisitions	5	3	31
9	Miscellaneous Equipment	2	1	21

Members spend more time on the tasks of the TACAN, IFF, & ILS/VOR Equipment module than any other module. The tasks of modules 1 and 2 are more general, and are performed by a very large number of 2P0X1 personnel. It is the tasks of module 29 which set the members of this job apart.

II. VOLTAGE, CURRENT, AND RESISTANCE EQUIPMENT JOB (STG167, N=67). Members in this job spend their time calibrating, aligning, troubleshooting, and repairing voltage, current, and impedance measuring TMDE. Thirty-three percent of their work time is spend on the tasks of Duty L, Maintaining Voltage, Current, and Impedance Equipment. Personnel in this job are junior, averaging only 44 months TAFMS, the fewest of any job or cluster. A total of 90 percent hold the paygrade of either E-3 or E-4, and 64 percent have the 3-skill level. Sixty-three percent of members described their primary work area as K1/K2, Voltage, Current, and Impedance Equipment. The most common tasks performed involve multimeters or voltmeters, or are general PMEL maintenance tasks. Some of the 71 tasks performed on average include:

- calibrate or align analog passive multimeters or accessories
- inspect TMDE for loose or foreign objects
- inspect, clean, or replace batteries
- inspect or replace common electrical hardware, such as power plugs or fuses
- calibrate or align analog active voltmeters
- troubleshoot or repair analog passive multimeters or accessories

Representative TMs for this cluster include:

TM	Module Title	Number of Tasks	% Time Spent	% Members Performing
32	Voltage, Current, and Resistance Meters	22	27	71
1	Basic Maintenance	9	15	86
2	Calculations and Analysis	11	6	41
14	Specialized Meters	4	3	51
5	Torque Wrenches	2	2	46

The above modules again point to the strong emphasis on tasks from the K1 and K2 areas. The high percent members performing the tasks of the Basic Maintenance module is an indication of their relative inexperience in the career field.

III. ELECTRICAL MEASUREMENT CONSOLES JOB (STG179, N=85). Members of this job spend the majority of their time, 35 percent, on the tasks of Duty S, Maintaining Electrical Measurement Consoles and Equipment (K8). Job incumbents have moderate seniority, averaging 96 months TAFMS. Eighty-four percent hold either the E-4 or E-5 paygrade, and 68 percent hold the 5-skill level. The most commonly performed tasks involve calibrating or aligning digital multimeters, voltage standards, or instrument calibrators. Members perform an average of 158 tasks, some of which include:

- calibrate or align digital multimeters, other than low-accuracy or test station digital multimeters
- calibrate or align low-accuracy digital multimeters
- calibrate or align DC voltage standards
- calibrate or align AC/DC instrument calibrators
- calibrate or align AC voltage standards
- calibrate or align standard resistors, other than current shuts
- calibrate or align decade resistors

Representative TMs for this cluster include:

TM	Module Title	Number of Tasks	% Time Spent	% Members Performing
20	AC/DC Electrical Measurement TMDE	70	31	62
32	Voltage, Current, & Resistance Meters	22	14	82
1	Basic Maintenance	9	6	91
18	AC/DC Electrical Measurement Standards	6	2	57
16	Phase-Angle TMDE	4	1	57

Members spend a third of their time on tasks relating to electrical measurement. Most members also perform the tasks of the Basic Maintenance module, but do not spend much time on those tasks.

IV. FREQUENCY GENERATING AND WAVEFORM ANALYZING EQUIPMENT CLUSTER (STG069, N=317). Members of this largest cluster work primarily in the K3 area in the PMEL. Members perform an average of 138 tasks, the third highest number, which most commonly include calibrating or aligning signal or function generators and oscilloscopes, performing the associated calculations, and general maintenance tasks. Forty-seven percent of incumbents indicated their primary work area is K3, Frequency Generating and Measuring Equipment, and an additional 11 percent work in K3, Waveform Analyzing Equipment.

Members spend 19 percent of their time on the tasks of Duty M, Maintaining Frequency Generating and Measuring Equipment (K3), and another 12 percent in Duty N, Maintaining Waveform Analyzing Equipment (K3). Eighty percent of the members of this cluster hold the E-4 or E-5 paygrades.. Some tasks which distinguish this cluster from others include:

- inspect TMDE for loose or foreign objects
- perform calculation using scientific calculators
- calibrate or align synthesized signal generators
- calibrate or align RF signal generators
- convert between time and frequencies
- calibrate or align function generators
- calibrate or align analog oscilloscopes
- calculate age or drift rates

Representative TMs for this cluster include:

TM	Module Title	Number of Tasks	% Time Spent	% Members Performing
13	Calibrating Frequency Generating & Analyzing Equipment	13	10	75
1	Basic Maintenance	9	8	90
2	Calculations and Analysis	11	7	71
15	Troubleshooting Frequency Generating & Analyzing Equipment	12	5	61
19	Microwave Equipment	10	5	54
17	Plug-In Units	8	3	45

Members perform tasks from a large number of modules, resulting in low percent time spent in any one module. However, the most commonly performed modules related to frequency generating and waveform analyzing equipment, and that is the core of this cluster. The large number of modules shows the diversity of the cluster's jobs, which are described below.

There were five jobs identified in the cluster. Members of the first job spend 44 percent of their time on the tasks of Duties M and N. With 175 members, this is the largest job in the cluster, and represents the core of the cluster. Members of this first job also performed some microwave equipment maintenance tasks, but not to the degree seen in the second job. The five members of the second job spend 35 percent of their job time performing microwave equipment maintenance tasks, such as calibrate or align bolometer or thermistor mounts, troubleshoot or repair microwave signal generators, and calibrate or align coaxial attenuators. The members of the third job perform markedly fewer tasks than the members of any other job. The 62 tasks

performed are very similar to those performed by other job incumbents, but this job is definitely narrower in scope. The fourth job is separated from the others because members perform some tasks relating to voltage, current, and impedance equipment. The 55 members of this job spend 10 percent of their time performing tasks such as calibrate or align AC/DC analog voltmeters and calibrate or align power meters. The fifth and final job in this cluster is distinguished by members performing more supervisory-type tasks. The 12 members perform tasks such as Supervise PMEL Journeymen (AFSC 2P051) and Write EPRs. All 12 members indicated that they supervise at least one individual. Another indication of their seniority is their TAFMS, which, at 170 months, is nearly twice the average of the cluster as a whole.

V. QUALITY PROCESS EVALUATOR CLUSTER (GP036, N=64). These members are unique because of tasks performed related to quality control. Incumbents perform several different reviews and numerous technical tasks as part of quality process reviews. Due to the fact that they inspect any piece of equipment, incumbents work with equipment from all areas of the laboratory. Members perform an average of 220 tasks, more than all but one other cluster. Incumbents are fairly senior, averaging 145 months TAFMS, and 6 percent hold the E-5 paygrade. Eighty-three percent of members listed Quality Assurance Inspector or Supervisor for a job title, and an equal percentage described their primary work area as Quality Assurance. Members spend 14 percent of their time on tasks from Duty G, Performing Quality Assurance Tasks, 9 percent of their time on the tasks of Duty P, Maintaining Electromechanical and Dimensional Equipment (K5 and K6), and another 9 percent on tasks from Duty C, Evaluating and Inspecting. The most commonly performed tasks include:

- perform TMDE quality process reviews (QPRs)
- perform in-process reviews (IPRs) of PMEL processes
- perform working standards reviews (WSRs)
- inspect TMDE for loose or foreign objects
- evaluate technical order improvement reports
- evaluate personnel for compliance with performance standards

Representative TMs for this cluster include:

TM	Module Title	Number of Tasks	% Time Spent	% Members Performing
52	Quality Assurance	5	10	87
45	Direct Supervision	12	6	49
1	Basic Maintenance	9	4	57
3	Deficiency Reports & Supply Requisitions	5	2	43

Members of this cluster perform a very large number of tasks, resulting in a large number of task modules, each with a small percent time spent. The most commonly performed module, Quality Assurance, highlights the core of this cluster.

The two jobs identified in the cluster differed in the number of tasks performed. The members of the first job performed almost 300 tasks, while the members of the second job performed fewer than 50 tasks.

VI. F-15 UNIQUE EQUIPMENT MAINTENANCE CLUSTER (STG114, N=30). Members of this cluster are unique in their maintenance of F-15 unique PME, such as weapons control test sets and sampling waveform digitizing systems. Incumbents on average perform 223 tasks, the most of any job or cluster, and have 116 months TAFMS. The majority of members, 53 percent, hold the E-5 paygrade, and 87 percent possess the 5-skill level. Sixty-seven percent of members supervise at least one individual in their current position. Some representative tasks for this cluster include:

- troubleshoot or repair avionics systems test stations using TMDE
- calibrate or align avionics systems test stations using TMDE
- troubleshoot or repair SWDSs
- calibrate or align SWDSs
- troubleshoot or repair test station frequency counters, such as 2129607 or 2129608
- calibrate or align TMDE using PATECs

Representative TMs for this cluster include:

TM	Module Title	Number of Tasks	% Time Spent	% Members Performing
60	F-15 Unique Equipment	74	22	57
1	Basic Maintenance	9	4	90
2	Calculations and Analysis	11	4	74
13	Calibrating Frequency Generating & Analyzing Equipment	13	4	59
8	Sampling Units	4	1	56

The module with the greatest percent time spent, F-15 Unique Equipment, defines this cluster. The large percent members performing for the other modules demonstrate the fact that members do not work only on F-15 unique equipment.

Two jobs make up the cluster. The focus of one job is almost exclusively on F-15 unique tasks such as those above, while members of the other job perform tasks relating to the K1/K2 and K3 areas. The members of this second job perform twice as many tasks on average.

VII. SECTION SUPERVISOR CLUSTER (STG086, N=25). These members are unique in their performance of first-line supervisory activities combined with some general maintenance tasks. Job titles for incumbents include Section NCOIC, Section Supervisor, and Team Leader. Members average 134 months TAFMS, more than the maintenance jobs, but less than the "pure" supervisory jobs. The most common paygrade is E-5. Members perform an average of 82 tasks, some of which are:

- inspect TMDE for loose or foreign objects
- write EPRs
- solder or desolder discrete circuit components, such as resistors ESDs, on single-layer circuit boards
- inspect or replace common electrical hardware, such as power plugs or fuses
- clean TMDE or components using chemicals
- supervise PMEL Journeymen (AFSC 2P051)

Representative TMs for this cluster include:

TM	Module Title	Number of Tasks	% Time Spent	% Members Performing
1	Basic Maintenance	9	10	86
45	Direct Supervision	12	9	55
2	Calculations and Analysis	11	7	51
3	Deficiency Reports & Supply Requisitions	5	4	58
11	Hazardous Material Handling	2	1	44

This group of TMs shows a mix of supervisory activities and technical tasks, and it is that mix which defines the cluster. The lower time spent on any one module is again a result of the diversity of tasks performed.

There were three jobs identified in this cluster. One job showed an emphasis on tasks relating to the maintenance of waveform analyzing equipment, such as oscilloscopes, and less supervision than the other two jobs. The second job had a higher number of personnel performing general maintenance tasks, such as inspecting CTKs. The third job has a secondary focus on voltage, current, and impedance equipment, such as voltmeters and multimeters.

VIII. F-16 UNIQUE EQUIPMENT MAINTENANCE CLUSTER (STG072, N=37). The members of this cluster are distinguished by their emphasis on F-16 unique PME. Members of this cluster spend 24 percent of their time on those tasks. They average 104 months TAFMS, and are almost evenly split between the E-4 and E-5 paygrades. Members are also fairly divided between type IV labs and consolidated type IIB/IV labs. They perform an average of 104 tasks such as:

- calibrate or align SMSs, such as 16U75501-series
- troubleshoot or repair STORES management systems (SMSs), such as 16U75501-series
- calibrate or align preload armament circuit test sets, such as 16U75060-series
- troubleshoot or align preload armament circuit test sets, such as 16U75060-series
- inspect TMDE for loose of foreign objects
- calibrate or align SRE, such as 16U75500-series
- calibrate or align SMSs breakout boxes, such as 15UE75517-series

Representative TMs for this cluster include:

TM	Module Title	Number of Tasks	% Time Spent	% Members Performing
22	F-16 Unique Equipment	16	20	80
1	Basic Maintenance	9	10	79
2	Calculations and Analysis	11	5	50
5	Torque Wrenches	2	2	57
4	Fabrication	3	1	39

The most commonly performed tasks and those on which members spend the most time are what distinguish this cluster from any other. As with the F-15 cluster, members in the combined Type II/IV labs do not work on aircraft-specific equipment exclusively, but also work in K areas.

There were three jobs identified within the cluster. Incumbents of the first job perform tasks relating to K1 and K2 equipment in addition to the F-16 specific equipment. The second job represents the core of the cluster, as members perform tasks on F-16 equipment almost exclusively. The members of the third job have more experience, and perform a broader range of tasks compared to either of the other two jobs.

IX. PHYSICAL AND DIMENSIONAL EQUIPMENT CLUSTER (STG087, N=170). Members of this cluster are distinguished by spending 46 percent of their time on the tasks of Duty P, Maintaining Electromechanical and Dimensional Equipment. Forty-six percent of members hold the E-5 paygrade, and 40 percent more hold the E-4 paygrade. Sixty-eight percent of incumbents are assigned to either ACC, PACAF, or USAFE. Members perform an average of 155 tasks, some of which include:

- calibrate or align bourdon tube-type gauges
- troubleshoot or repair bourdon tube-type gauges
- calibrate or align torque wrenches
- calibrate or align mechanical scales
- calibrate or align dial indicators
- calibrate or align micrometers, other than optical micrometers
- compute absolute, gauge, or differential pressures

Representative TMs for this cluster include:

TM	Module Title	Number of Tasks	% Time Spent	% Members Performing
30	Physical and Dimensional Equipment	24	15	74
1	Basic Maintenance	9	7	84
6	Mathematical Conversions	3	2	78
33	Oxygen TMDE	5	2	53
34	Jetcal & Altitude/Airspeed Equipment	4	2	52
5	Torque Wrenches	2	1	76

The above TMs demonstrate the primary emphasis of this cluster. In addition to the general physical-dimensional equipment, the modules show some specific areas where members spend time.

There are four jobs identified within the cluster. The first job was distinguished by a secondary emphasis on equipment and supply activities. This job is also more narrow, with incumbents performing an average of 60 tasks. The second job is also narrow in scope, and is

notable for a number of optical equipment tasks being performed by incumbents. The incumbents of the third job are performing tasks in the K1/K2 area, in addition to tasks in the K5/K6 area. The last job has members performing several supervisory tasks. This job also has the highest average TAFMS of the four jobs, 116 months.

X. TRAINING CLUSTER (STG096, N=20). The twenty members of this cluster are all assigned to the 336th Training Squadron at Keesler AFB. Incumbents spend 41 percent of their job time on tasks related to training. Members average 131 months TAFMS, and 60 percent hold the E-5 paygrade. All members described themselves as either instructors or instructor supervisors. Members perform only 42 tasks on average, among the lowest of the jobs and clusters. Tasks which distinguish this cluster are:

- develop lesson plans
- construct test or examinations, other than for upgrade training
- administer or score tests
- conduct resident course classroom training
- construct or develop training materials or aids
- write test questions

Representative TMs for this cluster include:

TM	Module Title	Number of Tasks	% Time Spent	% Members Performing
59	Formal Training	7	20	89
2	Calculations and Analysis	11	10	34
3	Deficiency Reports & Supply Requisitions	5	3	32
45	Direct Supervision	12	6	22

Members spend twice as much time on the Formal Training module as compared to any other. The tasks of the Direct Supervision module identify the instructor supervisors, as described below.

The two jobs identified varied in the amount of supervisory tasks performed. The first job focused on the day-to-day training tasks, such as "Develop lesson plans," while the members of the second job performed more supervisory tasks such as "Write EPRs."

XI. SUPPLY JOB (STG279, N=5). Members of this small job distinguish themselves by spending 58 percent of their time on supply and equipment activities. Incumbents are some of the most senior, averaging 174 months TAFMS. Members most commonly describe themselves as supply custodians. Forty percent of incumbents hold the E-7 paygrade, and 80 percent hold the 7-skill level. Some examples of the average of 36 tasks performed are:

- maintain property custodian authorization/custody receipt listings (CA/CRLs)
- research supply requisition data, such as supply catalogs or federal logistics (FEDLOG)
- inventory equipment, tools, or supplies, other than CTKs
- validate supply transaction listings or rosters, such as D-04, D-18, or M-30
- draft or write requisitions for equipment, tools, or supplies, other than for local purchase
- coordinate turn-in of excess or surplus property with base or other agencies

Representative TMs for this cluster include:

TM	Module Title	Number of Tasks	% Time Spent	% Members Performing
55	Supply	28	44	44
3	Deficiency Reports & Supply Requisitions	5	10	52
45	Direct Supervision	12	5	17
12	New Equipment	3	4	40

Members spend over 40 percent of their job time on the tasks from the Supply module. Many of the tasks from the other modules also relate to supply and equipment activities.

XII. SUPERVISION CLUSTER (STG074, N=136). Members of this cluster are distinguished from other 2P0X1 personnel by their focus on supervisory tasks. Incumbents spend 64 percent of their job time on those tasks. The members of this cluster are the most senior, averaging 211 months TAFMS, and E-7 is the most common paygrade. Common job titles include Branch Chief, Lab Superintendent or NCOIC, and Measurement Area Supervisor. Members of this group perform an average of 106 tasks, including:

- participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting
- write EPRs
- supervise PMEL Craftsmen (AFSC 2P071)
- write recommendations for awards or decorations
- counsel subordinates concerning personal matters
- conduct performance feedback evaluation sessions

Representative TMs for this cluster include:

TM	Module Title	Number of Tasks	% Time Spent	% Members Performing
50	Supervision	52	27	49
45	Direct Supervision	12	15	86
49	Scheduling	8	8	78
48	On-the-Job Training	9	5	47

Forty-two percent of incumbent's time is spent on tasks relating to supervision. Other modules demonstrate the senior management tasks performed by these members.

Three jobs were found in the cluster. The first job has 112 members and is the core of the cluster. Members of this first job spend 67 percent of their time on supervisory tasks. The second was distinguished by its members performing less than half as many tasks as the other two jobs. Members of the third job perform production control and PMEL Automated Maintenance Subsystem (PAMS) tasks, in addition to the supervisory tasks.

XIII. TECHNICAL ORDER JOB (STG151, N=5). Work with technical orders is what sets the members of this job apart from other 2P0X1 personnel. This job is narrow in scope, with members performing only 19 tasks on average, the fewest of any job or cluster. The majority of members hold the E-4 paygrade, and average 87 months TAFMS. All members indicated spending the majority of their time in the technical order distribution office. Sixty-one percent of job incumbent's time is spent on tasks related to technical orders, some of which include:

- maintain automated technical order management system (ATOMS) accounts
- maintain technical order distribution offices (TODOs)
- maintain technical order libraries

- maintain time compliance technical orders (TCTOs)
- determine or establish publication requirements
- maintain publication libraries, other than technical order libraries

Representative TMs for this cluster include:

TM	Module Title	Number of Tasks	% Time Spent	% Members Performing
57	Technical Orders	6	48	80
45	Direct Supervision	12	4	8
3	Deficiency Reports & Supply Requisitions	5	2	8
31	Mobile Calibrations	3	2	7
52	Quality Assurance	5	1	12

Members spend almost half their time on tasks related to technical orders. The narrow focus of this job is seen in the fact that the other modules are not performed by many members of the job, nor do they spend much time on those tasks.

XIV. PRODUCTION CONTROL CLUSTER (STG057, N=13). The members of this cluster are notable due to their emphasis on scheduling and coordinating the maintenance of TMDE. The average TAFMS is 104 months and 84 percent of members hold either the E-4 or E-5 paygrade. Incumbents perform only 37 tasks on average, some of which are:

- schedule TMDE for calibration
- perform PMEL automated management subsystem (PAMS) part number or data item inquiries for initial calibrations
- distribute TMDE reports or listings
- verify status of incoming TMDE, including documentation and condition
- maintain TMDE coordinator control books, logs, or appointment letters
- coordinate return of completed TMDE with appropriate agencies or OWCs

Representative TMs for this cluster include:

TM	Module Title	Number of Tasks	% Time Spent	% Members Performing
54	Production Control	5	16	77
55	Supply	28	9	11
3	Deficiency Reports & Supply Requisitions	5	4	34
31	Mobile Calibrations	3	1	21
5	Torque Wrenches	2	1	19

Like the above job, the members of this cluster focus on only a few tasks, spending little time on tasks not related to production control.

The two jobs in this cluster are distinct from one another because of the amount of supervision involved. Members of one job perform direct supervision tasks in addition to the scheduling tasks.

XV. PMEL AUTOMATED MAINTENANCE SUBSYSTEM (PAMS) JOB (STG218, N=12). This job is distinct from others because of its members focus on PAMS tasks. Members spend 63 percent of their time using and maintaining PAMS hardware and software. The average TAFMS is 175 months, second only to the Supervision Cluster. Fifty percent of members hold the E-5 paygrade, and an additional 25 percent hold the E-7 paygrade. Some representative tasks include:

- print or write PAMS reports
- troubleshoot PAMS hardware or software
- perform operator maintenance on PAMS equipment
- maintain PAMS data bases
- update PAMS data bases
- perform PAMS daily, weekly, or monthly backups

Representative TMs for this cluster include:

TM	Module Title	Number of Tasks	% Time Spent	% Members Performing
56	PAMS	25	63	87
52	Quality Assurance	5	3	23
3	Deficiency Reports & Supply Requisitions	5	2	20
54	Production Control	5	1	15

These TMs demonstrate a job with a very narrow focus. The 25 tasks in the PAMS module are performed far more commonly than other tasks, and account for a vast majority of their job time.

Comparison of Current Jobs to Previous Survey Findings

The results of the specialty job analysis were compared to those of the last PMEL OSR published in 1990. With some variance in the job titles between the two studies, the tasks that personnel performed in the previous OSR are generally found in the current study. As shown in Table 5, the majority of the jobs identified previously were also identified in this study, though there are some exceptions. The RADIAC Equipment Maintenance Job found in the last study did not break out as a separate job in the current study; the tasks performed were instead found in the Physical-Dimensional Cluster, although members spend only about 1 percent of their time on those tasks. In the current study, there are two jobs and one cluster which were not identified in the previous OSR. Some of the tasks performed by members of the Electrical Measurement Consoles Job were found in the previous Frequency Generating and Measuring Equipment Cluster. The tasks found in the F-15 Unique Equipment Maintenance Cluster and those found in the Supply Job were not identified in the previous OSR.

Summary

The six jobs and nine clusters identified in the current study describe the diversity of the specialty. The clusters and jobs cleanly differentiate between the personnel in the career ladder. There are a few basic tasks which are common to most of the clusters and jobs, but the vast majority of the tasks apply to only one or two jobs. The current results closely follow the historical career structure, with no major changes since the last survey.

TABLE 5

COMPARISON OF JOB GROUPS IN CURRENT STUDY
TO PREVIOUS STUDY

1996 STUDY (AFSC 2P0X1) (N=1,142)	1990 STUDY (AFSC 324X0) (N=1,923)
FREQUENCY GENERATING AND WAVEFORM ANALYZING EQUIPMENT CLUSTER	FREQUENCY GENERATING AND MEASURING EQUIPMENT CLUSTER
VOLTAGE, CURRENT, AND RESISTANCE EQUIPMENT JOB	VOLTAGE, CURRENT, AND IMPEDANCE EQUIPMENT CLUSTER
F-16 UNIQUE EQUIPMENT MAINTENANCE CLUSTER	F-16 UNIQUE WEAPONS SYSTEM PME CLUSTER
PHYSICAL AND DIMENSIONAL EQUIPMENT CLUSTER	ELECTROMECHANICAL AND DIMENSIONAL EQUIPMENT CLUSTER
SECTION SUPERVISOR CLUSTER SUPERVISION CLUSTER	PMEL MANAGERS AND LABORATORY CHIEFS CLUSTER
QUALITY PROCESS EVALUATOR CLUSTER	PMEL QUALITY ASSURANCE CLUSTER
PAMS JOB	PAMS CLUSTER
TRAINING CLUSTER	PMEL TECHNICAL TRAINING CLUSTER
TECHNICAL ORDER JOB	TECHNICAL ORDER DISTRIBUTION OFFICE JOB
PRODUCTION CONTROL CLUSTER	PMEL SCHEDULING JOB
	RADIAC EQUIPMENT MAINTENANCE JOB
ELECTRICAL MEASUREMENT CONSOLES JOB	
F-15 UNIQUE EQUIPMENT MAINTENANCE CLUSTER	
SUPPLY JOB	

ANALYSIS OF DAFSC GROUPS

An analysis of DAFSC groups, in conjunction with the analysis of the career ladder structure, is an important part of each occupational survey. The DAFSC analysis identifies differences in tasks performed at the various skill levels. This information may be used to evaluate how well career ladder documents, such as the CFETP, AFMAN 36-2108 *Specialty Description*, and the STS reflect what career ladder personnel are actually doing in the field.

The distribution of skill-level groups across the career ladder jobs is displayed in Table 6, while Table 7 offers another perspective by displaying the relative percent time spent on each duty across the skill-level groups.

A typical pattern of progression is noted within the AFSC 2P0X1 career ladder. Personnel at the 3- and 5-skill levels work in the technical jobs of the career ladder and spend most of their time working in the various K areas. As incumbents move up through the 7-skill level to the 9-skill and CEM level, higher percentages perform supervision and training functions, and they spend much less time on technical activities (see Tables 6 and 7).

Skill-Level Descriptions

DAFSC 2P031. The 180 airmen in the 3-skill level group, representing 16 percent of the survey sample, spend most of their job time on general maintenance activities and performing metrology computations (see Table 7). Thirty-seven percent are working in the Frequency Generating and Waveform Analyzing Equipment Cluster, with another 24 percent working in the Voltage, Current, and Resistance Equipment Job (see Table 6). The focus of their job is shown by Table 8, which lists representative tasks performed by 3-skill level incumbents. Most tasks listed relate to Duties J and K, Performing General PMEL Maintenance Tasks and Performing Metrology Computations and Analysis. Other tasks come from the K1/K2, K3, and, to a lesser extent, the K5/K6 areas.

DAFSC 2P051. The 663 airmen in the 5-skill level group represent 58 percent of the total survey sample. As with 3-skill level personnel, the largest percentages of these incumbents are working in the Frequency Generating and Waveform Analyzing Equipment Cluster; however, the percentage of 5-skill level personnel in this cluster is lower than the percentage for the 3-skill level personnel. In addition, 20 percent of 5-skill level personnel work in the Physical and Dimensional Equipment Cluster, as compared to only 11 percent of the 3-skill level personnel. Time in duties shows a slight increase of time spent on supervisory duties. The percentage of 5-skill level personnel in the Voltage, Current, and Resistance Equipment Job is only 3, as compared to 24 percent of the 3-skill level personnel (see Table 7).

TABLE 6

DISTRIBUTION OF SKILL-LEVEL MEMBERS ACROSS CAREER LADDER JOBS
(PERCENT)

JOB		DAFSC 2P031 (N=180)	DAFSC 2P051 (N=663)	DAFSC 2P071 (N=272)	DAFSC 2P091 (N=17)	DAFSC 2P000 (N=10)
I.	TACAN and IFF Equipment Job	0	1	0	0	0
II.	Voltage, Current, and Resistance Equipment Job	24	3	0	0	0
III.	Electrical Measurement Consoles Job	9	9	4	0	0
IV.	Frequency Generating and Waveform Analyzing Equipment Cluster	37	32	15	0	0
V.	Quality Process Evaluator Cluster	1	5	9	8	0
VI.	F-15 Unique Equipment Maintenance Cluster	0	4	1	0	0
VII.	Section Supervisor Cluster	0	2	4	0	0
VIII.	F-16 Unique Equipment Maintenance Cluster	1	5	1	0	0
IX.	Physical and Dimensional Equipment Cluster	11	20	6	0	0
X.	Training Cluster	0	2	2	0	0
XI.	Supply Job	0	0	1	0	0
XII.	Supervision Cluster	1	1	40	72	39
XIII.	Technical Order Job	1	1	0	0	0
XIV.	Production Control Cluster	1	1	1	0	0
XV.	PMEL Automated Maintenance Subsystem Job	0	1	2	0	0
	Not Grouped	15	12	14	20	61

TABLE 7

TIME SPENT ON DUTIES BY MEMBERS OF SKILL-LEVEL GROUPS
(RELATIVE PERCENT OF JOB TIME)

DUTIES		DAFSC 2P031 (N=180)	DAFSC 2P051 (N=663)	DAFSC 2P071 (N=272)	DAFSC 2P091 (N=17)	DAFSC 2P000 (N=10)
A	ORGANIZING AND PLANNING	2	2	13	23	29
B	DIRECTING AND IMPLEMENTING	*	2	12	19	21
C	EVALUATING AND INSPECTING	*	3	15	26	33
D	TRAINING	1	4	9	7	3
E	PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL DATA ACTIVITIES	2	3	5	11	7
F	PERFORMING SUPPLY AND EQUIPMENT ACTIVITIES	5	6	9	5	3
G	PERFORMING QUALITY ASSURANCE TASKS	*	1	3	3	3
H	PERFORMING PRODUCTION CONTROL TASKS	*	2	2	*	*
I	PERFORMING PMEL AUTOMATED MANAGEMENT SUBSYSTEM (PAMS) TASKS	*	2	3	1	*
J	PERFORMING GENERAL PMEL MAINTENANCE TASKS	19	12	5	*	*
K	PERFORMING METROLOGY COMPUTATIONS AND ANALYSIS	12	10	5	2	*
L	MAINTAINING VOLTAGE, CURRENT, AND IMPEDANCE EQUIPMENT (K1 AND K2)	13	5	2	*	*
M	MAINTAINING FREQUENCY GENERATING AND MEASURING EQUIPMENT (K3)	9	9	3	*	*
N	MAINTAINING WAVEFORM ANALYZING EQUIPMENT (K3)	7	6	2	*	*
O	MAINTAINING MICROWAVE EQUIPMENT (K4)	3	5	2	*	*
P	MAINTAINING ELECTROMECHANICAL AND DIMENSIONAL EQUIPMENT (K5/K6)	11	12	4	*	*
Q	MAINTAINING OPTICAL EQUIPMENT (K6)	*	1	*	*	*
R	MAINTAINING RADIAC EQUIPMENT (K7)	*	*	*	*	*
S	MAINTAINING ELECTRICAL MEASUREMENT CONSOLES AND EQUIPMENT (K8)	8	5	2	*	*
T	MAINTAINING AND OPERATING AUTOMATIC TEST EQUIPMENT	*	1	*	*	*
U	MAINTAINING SPECIAL TEST EQUIPMENT	2	5	2	*	*
V	MAINTAINING F-15 UNIQUE WEAPONS SYSTEM PRECISION MEASUREMENT EQUIPMENT (PME)	*	2	*	*	*
W	MAINTAINING F-15E UNIQUE WEAPONS SYSTEM PME	*	2	*	*	*
X	MAINTAINING F-16 UNIQUE WEAPONS SYSTEM PME	1	*	*	*	*

NOTE: Columns may not add exactly to 100 percent due to rounding

* Denotes less than 1 percent

TABLE 8

REPRESENTATIVE TASKS PERFORMED BY DAFSC 2P031 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=180)
J350	Inspect TMDE for loose or foreign objects	91
J349	Inspect, clean, or replace batteries	88
J351	Perform calculations using scientific calculators	86
J361	Solder or desolder discrete circuit components, such as resistors or ESDs, on single-layer circuit boards	84
J336	Clean TMDE or components using chemicals	83
J347	Inspect or replace common electrical hardware, such as power plugs or fuses	80
J348	Inspect or replace common nonelectrical hardware, such as knobs, screws, feet, or cases	79
K373	Compute limited certification values or ranges	71
J339	Clean, treat, or replace filters	69
J345	Identify substitutes for unavailable standards or equipment	64
K385	Convert between time and frequencies	61
L409	Calibrate or align analog passive multimeters or accessories	59
K368	Calculate current, voltage, impedance, reactance, resistance, capacitance, or power parameters	59
K390	Perform analyses of basic DC circuits	54
K389	Perform analyses of basic AC circuits	54
L408	Troubleshoot or repair analog passive multimeters or accessories	53
P800	Calibrate or align torque wrenches	51
L411	Calibrate or align analog active voltmeters	49
L413	Calibrate or align AC/DC analog voltmeters	48
P799	Troubleshoot or repair torque wrenches	47
L445	Calibrate or align RF millivoltmeters	47
F247	Inventory CTKs	44
S917	Calibrate or align low-accuracy digital multimeters	44
N555	Calibrate or align digital oscilloscopes, other than DPOs	43
N553	Calibrate or align analog oscilloscopes	42
J354	Perform PMIs on TMDE	42
A30	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	37

Representative tasks performed by 5-skill level incumbents are listed in Table 9. Table 10 reflects those tasks which best differentiate 5-skill level personnel from their 3-skill level counterparts. The tables show a decreased emphasis on the technical tasks, especially those related to voltage, current, and impedance equipment, and an added emphasis on some supervisory tasks. The information suggests that the 5-skill level members are still involved with the technical aspects of the job, but are also performing some supervision tasks.

DAFSC 2P071. The 272 7-skill level personnel represent 24 percent of the survey sample. Unlike their junior counterparts at the 3- and 5-skill levels, these personnel spend the largest percentage of their time on supervisory activities (40 percent versus 2 percent and 7 percent for the 3- and 5-skill levels, respectively (see Table 7)). The majority (40 percent) of 7-skill level personnel are in the Supervision Cluster (see Table 6).

Table 11 lists the most common tasks performed by 7-skill level personnel. Most of these involve supervisory functions; very few tasks performed by 7-skill level personnel are technical. Table 12 shows those tasks which best differentiate the 5- and 7-skill levels. As expected, the key differences are a greater emphasis on supervisory and administrative functions and significantly less emphasis on technical tasks at the 7-skill level. The 7-skill level personnel do perform some technical tasks, but in fewer numbers than the 5-skill level group.

DAFSC 2P091/00. The 27 members of this group represent only 2 percent of the survey sample. These individuals spend an even greater amount of time on supervisory activities than the 7-skill level personnel. The vast majority of the 9-skill level and CEM personnel are members of the Supervision Cluster. Many of the CEM personnel are in specialized jobs at the MAJCOM or HQ level, and therefore did not group in any of the jobs or clusters. Table 13 shows the tasks performed most commonly by these personnel. The tasks are exclusively managerial and supervisory in nature.

Table 14 shows which tasks best show the differences between this group and the 7-skill level group. The tasks performed more commonly by the 2P091/00 group reflect their position as senior management, as compared to the first-line supervisory tasks seen at the 7-skill level.

Summary

Progression in this career ladder follows a normal pattern of highly technical job focus at the lower skill levels with a broadening into first-line supervision at the 7-skill level and senior management at the 2P091/00 level. At the 3-skill level emphasis is seen in the Frequency Generating and Waveform Analyzing Equipment Cluster and in the Voltage, Current, and Resistance Equipment Job. At the 5-skill level members are most commonly found in the Frequency Generating and Waveform Analyzing Equipment Cluster and in the Physical and Dimensional Equipment Cluster. At the 7-skill level, the work is more focused with members

TABLE 9

REPRESENTATIVE TASKS PERFORMED BY DAFSC 2P051 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=663)
J350	Inspect TMDE for loose or foreign objects	86
J351	Perform calculations using scientific calculators	81
J336	Clean TMDE or components using chemicals	79
J347	Inspect or replace common electrical hardware, such as power plugs or fuses	78
J349	Inspect, clean, or replace batteries	78
J361	Solder or desolder discrete circuit components, such as resistors or ESDs, on single-layer circuit boards	76
J348	Inspect or replace common nonelectrical hardware, such as knobs, screws, feet, or cases	75
K373	Compute limited certification values or ranges	73
J339	Clean, treat, or replace filters	68
J345	Identify substitutes for unavailable standards or equipment	61
D134	Conduct on-the-job training (OJT)	58
F247	Inventory CTKs	58
K368	Calculate current, voltage, impedance, reactance, resistance, capacitance, or power parameters	57
K390	Perform analyses of basic DC circuits	56
K389	Perform analyses of basic AC circuits	56
K379	Construct calibration correction charts or graphs	56
K385	Convert between time and frequencies	55
F267	Research supply requisition data, such as supply catalogs or federal logistics (FEDLOG)	52
K387	Interpolate readings, charts, or graphs	52
J354	Perform PMIs on TMDE	51
K395	Perform analyses of signals using frequency-domain TMDE	45
A30	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	44
F268	Research technical orders to identify components or items of equipment	42
M532	Calibrate or align synthesized signal generators	42
K396	Perform analyses of signals using time-domain TMDE	42
P800	Calibrate or align torque wrenches	41
N553	Calibrate or align analog oscilloscopes	41
M524	Calibrate or align RF signal generators	41

TABLE 10

TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 2P031 AND DAFSC 2P051 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		2P031 (N=180)	2P051 (N=663)	DIFFERENCE
L408	Troubleshoot or repair analog passive multimeters or accessories	53	29	24
L409	Calibrate or align analog passive multimeters or accessories	59	35	24
D141	Counsel trainees on training progress	*	35	-34
B80	Supervise PMEL Apprentices (AFSC 2P031)	2	36	-34
B81	Supervise PMEL Journeymen (AFSC 2P051)	1	45	-44
C86	Conduct performance feedback evaluation sessions	*	44	-44
C123	Write EPRs	*	47	-47
D134	Conduct on-the-job training	20	80	-60

* Less than 1 percent

TABLE 11

REPRESENTATIVE TASKS PERFORMED BY DAFSC 2P071 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=272)
A30	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	82
C123	Write EPRs	79
C86	Conduct performance feedback evaluation sessions	75
B49	Counsel subordinates concerning personal matters	72
C125	Write recommendations for awards or decorations	71
C103	Evaluate personnel for compliance with performance standards	67
B81	Supervise PMEL Journeymen (AFSC 2P051)	64
C115	Inspect personnel for compliance with military standards	61
B82	Supervise PMEL Craftsmen (AFSC 2P071)	60
A24	Establish performance standards for subordinates	60
F267	Research supply requisition data, such as supply catalogs or federal logistics (FEDLOG)	58
D134	Conduct on-the-job training (OJT)	57
A36	Plan or schedule work assignments or priorities	56
D168	Maintain training records, charts, graphs, or files	55
B73	Interpret policies, directives, or procedures for subordinates	53
C104	Evaluate personnel for promotion, demotion, reclassification, or special awards	53
C105	Evaluate PMEL maintenance procedures	51
D161	Evaluate progress of trainees	51
A1	Assign personnel to work areas or duty positions	48
A41	Schedule personnel for temporary duty (TDY) assignments, leaves, or passes	46
B45	Adjust daily maintenance plans to meet operation commitments	45
C84	Analyze workload requirements	45
A28	Establish work schedules	44
B66	Implement work methods, controls, or procedures	44
C87	Conduct safety inspections of facilities or equipment	43
E179	Compile information for records, reports, or logs	39
E180	Compile statistics on trend analyses	33

TABLE 12

TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 2P051 AND DAFSC 2P071 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		2P051 (N=663)	2P071 (N=272)	DIFFERENCE
J336	Clean TMDE or components using chemicals	79	37	42
J349	Inspect, clean, or replace batteries	79	38	41
J350	Inspect TMDE for loose or foreign objects	86	47	39
J361	Solder or desolder discrete circuit components, such as resistors or ESDs, on single-layer circuit boards	76	38	38
B49	Counsel subordinates concerning personal matters	30	72	-42
B48	Conduct supervisory orientations for newly assigned personnel	12	56	-44
C125	Write recommendations for awards or decorations	24	71	-47
B82	Supervise PMEL Craftsmen (AFSC 2P071)	8	60	-52

TABLE 13

REPRESENTATIVE TASKS PERFORMED BY DAFSC 2P091 AND 2P000 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=27)
A30	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	96
C123	Write EPRs	93
A40	Review drafts of regulations, manuals, or other directives	89
C125	Write recommendations for awards or decorations	89
B49	Counsel subordinates concerning personal matters	85
C86	Conduct performance feedback evaluation sessions	85
B82	Supervise PMEL Craftsmen (AFSC 2P071)	81
C115	Inspect personnel for compliance with military standards	81
C113	Indorse enlisted performance reports (EPRs)	78
C104	Evaluate personnel for promotion, demotion, reclassification, or special awards	78
A43	Write job or position descriptions	78
C98	Evaluate job or position descriptions	78
B47	Conduct general staff meetings or briefings	78
C103	Evaluate personnel for compliance with performance standards	78
C92	Evaluate budget requirements	74
C84	Analyze workload requirements	74
A24	Establish performance standards for subordinates	74
A18	Draft or write agenda for general meetings, such as staff meetings, briefings, conferences, or workshops	70
A31	Plan briefings, conferences, or workshops	70
C96	Evaluate inspection report findings or inspection procedures	70
E180	Compile statistics on trend analyses	70
C127	Write staff studies, surveys, or special reports, other than training reports	67
C105	Evaluate PMEL maintenance procedures	67
C126	Write replies to inspection reports	67
B79	Supervise military personnel with AFSCs other than AFSC 2P0X1	63
E179	Compile information for records, reports, or logs	63
E183	Coordinate obtaining TDY orders, passports, or visas with appropriate agencies	59
A42	Schedule staff assistance visits, inspections, or audits	59
B78	Supervise civilian employees	56
G285	Perform AGMC evaluations of PMELs	22

TABLE 14

TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSC 2P071 AND DAFSC 2P091/00 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		2P071 (N=272)	2P091/00 (N=27)	DIFFERENCE
J347	Inspect or replace common electrical hardware, such as power plugs or fuses	44	0	44
J350	Inspect TMDE for loose or foreign objects	47	4	43
F247	Inventory CTKs	42	4	38
J361	Solder or desolder discrete circuit components, such as resistors or ESDs, on single-layer circuit boards	38	0	38
C98	Evaluate job or position descriptions	25	78	-53
A16	Draft budget requirements	16	70	-54
C92	Evaluate budget requirements	19	74	-55
A40	Review drafts of regulations, manuals, or other directives	33	89	-56

performing mostly supervisory activities, though members are found in other jobs, notably the Frequency Generating and Waveform Analyzing Equipment Cluster. At the most senior level, the work is almost exclusively supervision and management.

ANALYSIS OF AFMAN 36-2108 *SPECIALTY DESCRIPTION*

Survey data were compared to the AFMAN 36-2108 *Specialty Description* for the PMEL, effective 31 October 1994. This specialty description is intended to provide a broad overview of the duties and responsibilities of each skill level. In general, the specialty description covers tasks and jobs performed by career ladder personnel. It should be noted, however, that the AFMAN 36-2108 *Specialty Description* does not specify duties and responsibilities for each skill level, so a detailed analysis is not possible.

TRAINING ANALYSIS

Occupational survey data represent one of many sources of information which are used to assist in the development of training programs for career ladder personnel. OSR data useful to training personnel include job descriptions for the various jobs performed within a career ladder, distribution of personnel across career ladder jobs, percentages of personnel performing specific tasks, and percentages of personnel maintaining specific equipment or systems, as well as the difficulty of tasks and TE ratings gathered from senior members of the career ladder.

Training Emphasis (TE) and Task Difficulty (TD) Data

TE and TD data are secondary factors that can help technical school personnel decide which entry-level training tasks to emphasize. These ratings, based on the judgments of senior career ladder NCOs at operational units, provide training personnel with a rank ordering of those tasks considered important for first-enlistment airman training (TE), and a measure of the difficulty of those tasks (TD). When combined with data on the percentages of first-enlistment personnel performing tasks, comparisons can be made to determine if training adjustments are necessary. For example, tasks receiving high ratings on both task factors (TE and TD), accompanied by moderate to high percentages performing, may warrant resident training. Those tasks receiving high task factor ratings but low percentages performing may be more appropriately planned for OJT programs within the career ladder. Low task factor ratings may highlight tasks best omitted from training for first-enlistment personnel. This decision must be weighed against percentages of personnel performing the tasks, command concerns, and criticality of the tasks.

Table 15 lists the tasks having the highest TD ratings. The percentages of first-job, first-enlistment, 5-, and 7-skill level personnel performing are also included for each task, as are the TE ratings. The majority of tasks with high difficulty are not performed by high percentages of any group, and only two have above-average TE. Many of the tasks rated highest in TD relate to aircraft specific items.

Table 16 displays the tasks with the highest TE ratings, along with the percent of TAFMS group members performing those tasks. The top rated tasks involve the analysis of basic circuits. Other highly rated tasks related to the alignment or calibration of common equipment pieces, such as multimeters, torque wrenches, and oscilloscopes. The percentage of first job and first-enlistment personnel performing these tasks are generally high, while the TD ratings are generally below the mean.

To assist training personnel, AFOMS has developed a computer program that incorporates task factor ratings and the percentage of first-enlistment personnel performing each task into a computed value called an ATI. ATI values correspond to training decisions listed and defined in the Training Decision Logic Table found in Attachment 2, AETC Instruction 36-2601. These values allow training personnel to quickly focus on those tasks best suited for each training environment, be it resident course training or OJT.

Tasks rated highest in ATI can be found in Table 17. The tasks found there are similar to those found in Table 16; many of the tasks can be found on both tables. Those tasks rated 18 warrant consideration for inclusion in the resident course. Tasks rated 13 may be best trained by OJT, if the task is not critical or a documented safety item (See AETC Instruction 36-2601, Attachment 2 for a more complete description of the training decision for each ATI value).

Various lists of tasks, accompanied by TD, TE, and ATI ratings, are contained in the TRAINING EXTRACT package and should be reviewed in detail by technical school personnel. For a more detailed explanation of TD, TE, and ATI ratings, see the Task Factor Administration in the **SURVEY METHODOLOGY** section of this report.

First-Enlistment Personnel

In this study, there are 256 members in their first enlistment (1-48 months TAFMS), representing 22 percent of the survey sample. As displayed in Table 18, their time is distributed across numerous duties. The table shows that almost 20 percent of their time is spent on general PMEL tasks, with an additional 11 percent of their time spent on related to metrology computations. Members spend an almost equal amount of time in K1/K2, K3, and K5/K6 areas. Figure 2 shows how all first-enlistment personnel are distributed across the jobs identified in the **SPECIALTY JOBS** section of this report. Of the jobs identified, 38 percent of first-enlistment personnel are found in the Frequency Generating and Waveform Analyzing Cluster and another 18 percent are in the Voltage, Current, and Resistance Job.

TABLE 15

DAFSC 2P0X1 TASKS WITH HIGHEST TASK DIFFICULTY RATINGS

			PERCENT MEMBERS PERFORMING				
		TASK DIFF	1ST JOB	1ST ENL	5-LVL	7-LVL	TNG EMP
T964	Develop ATE software	7.67	0	0	2	2	.91
V1093	Troubleshoot or repair SWDSs	7.57	2	6	9	3	.50
G285	Perform AGMC evaluations of PMELs	7.55	0	0	1	3	.09
V1139	Troubleshoot or repair TITE spectrum analyzers	7.38	0	0	1	0	.22
V1075	Troubleshoot or repair microwave noise analyzers	7.21	0	2	4	3	.39
N589	Troubleshoot or repair spectrum analyzers, other than tactical electronic warfare systems (TEWSs) intermediate test equipment (TITE) spectrum analyzers	7.17	2	10	21	10	2.55
V1077	Troubleshoot or repair microwave synthesizer system units (MSSUs)	7.16	0	1	2	1	.28
U1047	Troubleshoot or repair tactical air navigation (TACAN) related test equipment, other than navigational test sets	7.12	2	9	16	10	1.12
O655	Troubleshoot or repair fiber-optic spectrum analyzers	7.06	0	0	1	1	.52
I332	Troubleshoot PAMS hardware or software	7.02	0	2	6	10	.40
V1079	Troubleshoot or repair modulated microwave sources, such as Watkins-Johnson	7.02	0	1	3	3	.22
U1008	Troubleshoot or repair identification friend or foe (IFF) or selective identification feature (SIF) transponder test sets	7.02	2	7	18	10	1.15
O624	Troubleshoot or repair network analyzers	7.02	0	1	5	3	1.00
V1133	Troubleshoot or repair phase-noise measurement consoles, such as 3048A-E41	6.98	0	0	1	2	.35
O597	Troubleshoot or repair attenuator calibrators	6.93	0	6	14	10	2.29
W1179	Troubleshoot or repair test station noise analyzers, such as 199252528-4	6.90	0	1	2	1	.25
A16	Draft budget requirements	6.90	0	0	2	16	.12
Q857	Troubleshoot or repair theodolites	6.89	0	2	8	4	.98
U969	Troubleshoot or repair aircraft compass calibration test sets	6.87	0	2	5	0	.41

TD MEAN = 5.00 SD = 1.00
TE MEAN = 1.23 SD = 1.33

TABLE 16

DAFSC 2P0X1 TASKS WITH HIGHEST TRAINING EMPHASIS RATINGS

		TNG EMP	% MBRS PERF 1ST JOB	% MBRS PERF 1ST ENL	TSK DIF
K390	Perform analyses of basic DC circuits	6.88	59	55	4.60
K389	Perform analyses of basic AC circuits	6.84	61	54	4.81
K391	Perform analyses of integrated circuit (IC) boards	6.39	35	43	5.34
J345	Identify substitutes for unavailable standards or equipment	6.31	68	63	5.14
K397	Perform analyses of solid-state circuits	6.05	17	24	5.03
L409	Calibrate or align analog passive multimeters or accessories	5.70	64	49	3.43
P800	Calibrate or align torque wrenches	5.69	44	49	2.71
M480	Calibrate or align electronic counters or PIUs	5.68	29	40	4.15
K368	Calculate current, voltage, impedance, reactance, resistance, capacitance, or power parameters	5.62	61	58	4.54
M498	Calibrate or align function generators	5.59	32	42	4.27
N563	Calibrate or align distortion analyzers	5.59	32	44	4.43
L442	Troubleshoot or repair power supplies	5.51	20	21	4.69
N553	Calibrate or align analog oscilloscopes	5.47	42	40	4.25
M532	Calibrate or align synthesized signal generators	5.46	20	36	5.38
J361	Solder or desolder discrete circuit components, such as resistors or ESDs, on single-layer circuit boards	5.44	85	86	3.81
N555	Calibrate or align digital oscilloscopes, other than DPOs	5.39	45	45	4.79
L408	Troubleshoot or repair analog passive multimeters or accessories	5.36	58	45	4.05
K373	Compute limited certification values or ranges	5.36	67	68	4.14
M524	Calibrate or align RF signal generators	5.30	26	38	4.78
M538	Calibrate or align time-mark generators	5.28	35	45	4.14
J347	Inspect or replace common electrical hardware, such as power plugs or fuses	5.28	85	80	2.69
K396	Perform analyses of signals using time-domain TMDE	5.22	30	34	4.90
K395	Perform analyses of signals using frequency-domain TMDE	5.20	30	39	4.98

TE MEAN = 1.23 SD = 1.33
TD MEAN = 5.00 SD = 1.00

TABLE 17

DAFSC 2P0X1 TASKS WITH HIGHEST AUTOMATED TRAINING INDICATOR (ATI) RATINGS

		1ST ENL PMP	TNG EMP	TSK DIF	ATI
J345	Identify substitutes for unavailable standards or equipment	63	6.31	5.14	18
J362	Solder or desolder discrete circuit components, such as resistors or ESDs, on multilayer circuit boards	51	4.12	5.07	18
J351	Perform calculations using scientific calculators	84	4.72	4.14	18
K368	Calculate current, voltage, impedance, reactance, resistance, capacitance, or power parameters	58	5.62	4.54	18
K389	Perform analyses of basic AC circuits	54	6.84	4.81	18
K390	Perform analyses of basic DC circuits	55	6.88	4.60	18
K373	Compute limited certification values or ranges	68	5.36	4.14	18
J357	Repair damaged sections of single-layer circuit cards, such as cracks or damaged runs, using soldering irons	57	4.81	4.76	18
J348	Inspect or replace common nonelectrical hardware, such as knobs, screws, feet, or cases	78	3.71	2.14	13
J350	Inspect TMDE for loose or foreign objects	90	4.75	1.75	13
J339	Clean, treat, or replace filters	70	3.64	1.89	13
J336	Clean TMDE or components using chemicals	85	3.99	2.83	13
J347	Inspect or replace common electrical hardware, such as power plugs or fuses	80	5.28	2.69	13
K385	Convert between time and frequencies	60	4.71	3.16	13
J361	Solder or desolder discrete circuit components, such as resistors or ESDs, on single-layer circuit boards	86	5.44	3.81	13
J349	Inspect, clean, or replace batteries	86	3.85	2.03	13
K386	Identify gross, systematic, or random errors	32	4.29	4.13	12
J356	Repair damaged sections of single-layer circuit cards, such as cracks or damaged runs, using Pace system	33	4.68	4.84	12
S914	Troubleshoot or repair digital multimeters, other than low-accuracy or test station digital multimeters	30	4.90	5.71	12
M532	Calibrate or align synthesized signal generators	36	5.46	5.38	12
K391	Perform analyses of integrated circuit (IC) boards	43	6.39	5.34	12
L406	Troubleshoot or repair AC/DC analog ammeters	33	4.20	4.40	12

TE MEAN = 1.23; SD = 1.33
TD MEAN = 5.00; SD = 1.00

TABLE 18

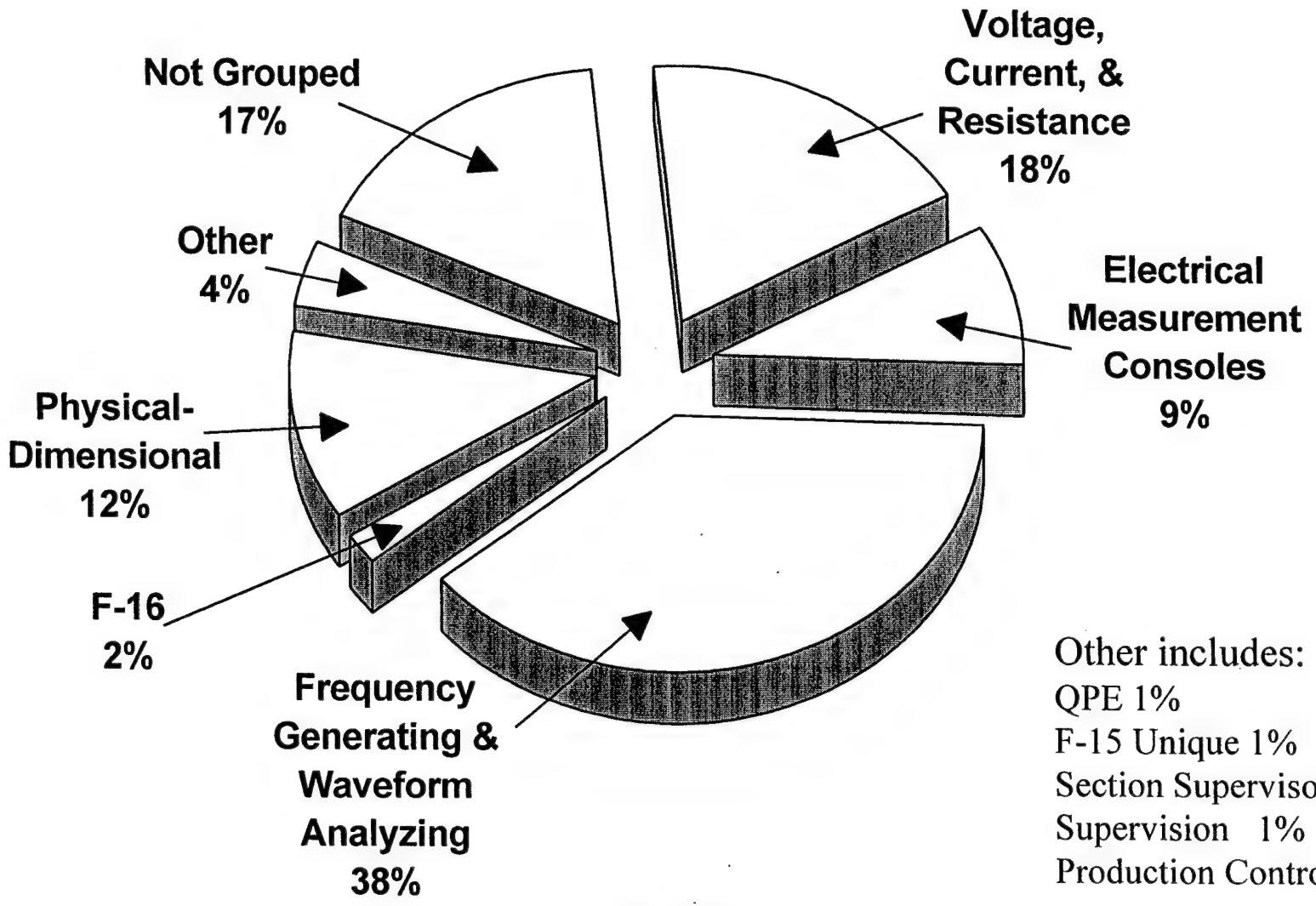
RELATIVE PERCENT OF TIME SPENT ACROSS DUTIES BY FIRST-ENLISTMENT AFSC 2P0X1 PERSONNEL (N=256)

DUTIES		PERCENT TIME SPENT
A	ORGANIZING AND PLANNING	1
B	DIRECTING AND IMPLEMENTING	*
C	EVALUATING AND INSPECTING	*
D	TRAINING	*
E	PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL DATA ACTIVITIES	2
F	PERFORMING SUPPLY AND EQUIPMENT ACTIVITIES	6
G	PERFORMING QUALITY ASSURANCE TASKS	*
H	PERFORMING PRODUCTION CONTROL TASKS	1
I	PERFORMING PMEL AUTOMATED MANAGEMENT SUBSYSTEM (PAMS) TASKS	*
J	PERFORMING GENERAL PRECISION MEASUREMENT EQUIPMENT LABORATORY (PMEL) MAINTENANCE TASKS	18
K	PERFORMING METROLOGY COMPUTATIONS AND ANALYSES	11
L	MAINTAINING VOLTAGE, CURRENT, AND IMPEDANCE EQUIPMENT (K1 AND K2)	11
M	MAINTAINING FREQUENCY GENERATING AND MEASURING EQUIPMENT (K3)	10
N	MAINTAINING WAVEFORM ANALYZING EQUIPMENT (K3)	7
O	MAINTAINING MICROWAVE EQUIPMENT (K4)	4
P	MAINTAINING ELECTROMECHANICAL AND DIMENSIONAL EQUIPMENT (K5 AND K6)	11
Q	MAINTAINING OPTICAL EQUIPMENT (K6)	*
R	MAINTAINING RADIAC EQUIPMENT (K7)	*
S	MAINTAINING ELECTRICAL MEASUREMENT CONSOLES AND EQUIPMENT (K8)	7
T	MAINTAINING AND OPERATING AUTOMATIC TEST EQUIPMENT	1
U	MAINTAINING SPECIAL TEST EQUIPMENT	3
V	MAINTAINING F-15 UNIQUE WEAPONS SYSTEM PRECISION MEASURING EQUIPMENT (PME)	1
W	MAINTAINING F-15E UNIQUE WEAPONS SYSTEM PME	*
X	MAINTAINING F-16 UNIQUE WEAPONS SYSTEM PME	1

* Denotes less than 1 percent

NOTE: Columns may not add to 100 percent due to rounding

AFSC 2P0X1 FIRST ENLISTMENT SPECIALTY JOBS
(N=256)



Other includes:
QPE 1%
F-15 Unique 1%
Section Supervisor 1%
Supervision 1%
Production Control 1%

FIGURE 2

Table 19 displays commonly performed tasks for first-enlistment personnel. The majority of tasks displayed involve general PMEL activities and computations. There are also a handful of tasks relating to the K1/K2 and K3 areas. This is consistent with the data presented in Table 16 and Figure 2. Equipment utilized by 30 percent or more of first-job or first-enlistment personnel is listed in Table 20.

Specialty Training Standard (STS)

Training personnel from Sheppard AFB matched tasks in the JI to appropriate sections of the STS. A listing of the STS was then produced showing each STS paragraph and subparagraph, tasks matched, and percent criterion group members performing. This listing is included in the Training Extract sent to the school for review. Criteria set forth in AETC Instruction 36-2601, Attachment 2, were used to review the relevance of each STS paragraph and subparagraph with matched tasks.

Any STS paragraph or subparagraph with matched tasks performed by 20 percent or more of first-job (1-24 months TAFMS), first-enlistment (1-48 months TAFMS), 5-, or 7-skill level members is considered to be supported and should be retained in the STS. General paragraphs, such as Security, AF Occupational Safety and Health Program, USAF Graduate Evaluation Program, Supervision, and Training (paragraphs 1, 2, 6, and 7) were not reviewed. The remaining paragraphs were thoroughly reviewed against OSR data. Due to the diverse nature of the career ladder, the standard analysis involving TAFMS and DAFSC groups resulted in a high number of unsupported STS items. For example, the aircraft-specific sections of the STS received very little support, as there are very few individuals who work on that equipment exclusively (see Figure 1). Therefore, the STS was evaluated using percent members performing in jobs and clusters as the criterion groups. This resulted in a higher level of support for the STS. It must be acknowledged, however, that some of the jobs or clusters which support the STS items contain only a few members. Table 21 lists example STS items and matched tasks which did not meet the normal criteria, while Table 22 shows example STS items not supported by job group data.

Tasks not matched to any element of the STS are listed at the end of the STS computer listing. There were several technical tasks performed by more than 20 percent of criterion group members that were not matched to the STS. Table 23 shows some of those tasks and the percent members performing. In addition to these technical tasks, there were several supervisory-type tasks which were performed by high percentages of the 7-skill level group members. There were no specific STS items relating to quality control, so many of those tasks were matched to item 10a. A few of these tasks had greater than 20 percent members performing for the 5- and 7-skill level groups. The same is true of several tasks pertaining to the repair of circuit cards. These circuit card tasks had high percent members performing for the first-job and first-enlistment groups. These tasks, and all tasks not referenced should be reviewed to identify areas which may be included in future STSs.

TABLE 19

MOST COMMONLY PERFORMED TASKS FOR
FIRST-ENLISTMENT 2P0X1 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=256)
J350	Inspect TMDE for loose or foreign objects	90
J349	Inspect, clean, or replace batteries	86
J361	Solder or desolder discrete circuit components, such as resistors or ESDs, on single-layer circuit boards	86
J336	Clean TMDE or components using chemicals	85
J351	Perform calculations using scientific calculators	84
J347	Inspect or replace common electrical hardware, such as power plugs or fuses	80
J348	Inspect or replace common nonelectrical hardware, such as knobs, screws, feet, or cases	78
J339	Clean, treat, or replace filters	70
K373	Compute limited certification values or ranges	68
J345	Identify substitutes for unavailable standards or equipment	63
K385	Convert between time and frequencies	60
K368	Calculate current, voltage, impedance, reactance, resistance, capacitance, or power parameters	58
K390	Perform analyses of basic DC circuits	55
K389	Perform analyses of basic AC circuits	54
F247	Inventory CTKs	51
J362	Solder or desolder discrete circuit components, such as resistors or ESDs, on multilayer circuit boards	51
P800	Calibrate or align torque wrenches	49
L409	Calibrate or align analog passive multimeters or accessories	49
P799	Troubleshoot or repair torque wrenches	46
J354	Perform PMIs on TMDE	45
N555	Calibrate or align digital oscilloscopes, other than DPOs	45
L413	Calibrate or align AC/DC analog voltmeters	44
L411	Calibrate or align analog active voltmeters	43
K367	Calculate age or drift rates	43
N553	Calibrate or align analog oscilloscopes	40
M480	Calibrate or align electronic counters or PIUs	40
M524	Calibrate or align RF signal generators	38

TABLE 20

EQUIPMENT ITEMS USED BY MORE THAN 50 PERCENT OF FIRST-JOB OR FIRST-ENLISTMENT AFSC 2P0X1 PERSONNEL

EQUIPMENT	PERCENT MEMBERS USING 1ST JOB (N=66)	1ST ENL (N=256)
Multimeter, Digital	97	88
Standard, AC	89	82
Standard, DC	89	81
Counter, Frequency	85	86
Standard, Resistance	83	67
Resistor, Decade	82	73
Attenuator	77	79
Probe, High Voltage	77	68
Oscillator, Test	76	77
Counter, Electronic	76	76
Voltmeter, Differential	76	71
Calculator, Scientific	73	76
Oscilloscope, Digital	73	74
Voltmeter, Digital	72	86
Detector, Null	71	70
Generator, Function	70	75
Generator, Level Sinewave	70	73
Torque Wrench	70	70
Generator, Time Mark	68	73
Millivoltmeter, RF	67	66
Termination, Coaxial	67	65
Calibrator, Torque/Tension	65	67
Analyzer, Spectrum	64	75
Power Sensor	64	75
Meter, Current	64	58
Multimeter, Passive	64	54
Current Shunt	62	57
Standard, Torque Calibration	61	58
Dividers, Alternating Current	61	54
Dividers, Direct Current	59	52
Standard, Frequency	58	59
Dividers, AC/DC	58	50
Analyzer, Distortion	56	71
Standard, AC/DC, other than Transfer	56	55
Standard, Current	56	50
Dividers, High Voltage	55	50
Generator, Pulse	53	60
Mount, Thermistor	52	57
Calibrator, Power Meter	50	61
Oscilloscope Calibration Package	50	58

TABLE 20 (CONTINUED)

EQUIPMENT ITEMS USED BY MORE THAN 50 PERCENT OF FIRST-JOB OR FIRST-ENLISTMENT AFSC 2P0X1 PERSONNEL

EQUIPMENT	PERCENT MEMBERS USING 1ST JOB (N=66)	1ST ENL (N=256)
Generator, Fast-Rise Time	50	57
Capacitor, Standard	47	43
Converter, Thermal	45	60
Power Meter, Peak	45	59
Generator, Synthesized Signal	44	61
Oscilloscope, Storage	44	60
Tester, Huntron-Tracker	44	58
Generator, Sweep	42	57
Power Supply Unit, Regulated	38	53
Head, Sampling	36	54
Generator, Microwave Signal	36	52
Power Divider or Splitter	35	52
Calibrator, Attenuator	35	50

TABLE 21

EXAMPLE STS ITEMS NOT SUPPORTED BY OSR DATA

STS REFERENCE/TASKS	3-LVL COURSE PROF CODE	% MEMBERS PERFORMING 1ST JOB (N=66)	1ST ENL (N=256)	5-LVL (N=663)	7-LVL (N=272)
12d(2). Troubleshoot/Repair	-				
S875 Troubleshoot or repair AC ratio standards		3	6	7	3
S885 Troubleshoot or repair AC voltage dividers		5	7	9	5
S909 Troubleshoot or repair decade or ratio transformers		1	5	4	4
12h(2). Align	-				
S881 Calibrate or align AC/DC instrument calibrators		11	15	17	19
13l(3). Troubleshoot/Repair	-				
N576 Troubleshoot or repair modulation analyzers		2	7	14	7
13s(3). Troubleshoot/Repair	-				
M545 Troubleshoot or repair vector voltmeters		0	9	16	9
14d(3). Troubleshoot/Repair	-				
O632 Troubleshoot or repair power sensors		3	7	15	10
14k(3). Troubleshoot/Repair	-				
O638 Troubleshoot or repair swept-frequency generators		0	10	17	8
15c(3). Troubleshoot/Repair	-				
P698 Troubleshoot or repair dial indicators		3	10	17	1
P714 Troubleshoot or repair electronic-height gauges		2	5	11	4
P728 Troubleshoot or repair gauge blocks		2	12	15	5
P772 Troubleshoot or repair push-pull gauges		0	9	14	6
P801 Troubleshoot or repair vernier calipers		0	4	10	6
P803 Troubleshoot or repair vernier-height gauges		0	1	3	1
17c(4). Calibrate	-				
R862 Calibrate or align digital dosimeters		0	1	9	9
R864 Calibrate or align Geiger-Mueller detectors		0	2	11	11
R870 Calibrate or align scintillation detectors		0	1	9	10
18h(1). Align	-				
V1072 Calibrate or align load-force simulators		0	0	2	1

TABLE 22

EXAMPLE STS ITEMS NOT SUPPORTED BY SPECIALTY JOB GROUP DATA

		TAC IFF	K1/ K2	K8	K3	QPE	F15	F16	PHY D	SUP PLY	TOs	PRD CTL	PA MS
9b.	*Complete Deficiency Reports*												
F244	Identify problem areas using deficiency, service, or status reports, such as RODs	0	0	1	4	11	3	5	4	0	0	0	0
13o(2).	*Align*												
N575	Calibrate or align logic analyzers	0	0	0	4	9	3	0	0	0	0	0	0
14i(3).	*Troubleshoot/Repair*												
O624	Troubleshoot or repair network analyzers	0	0	1	9	14	3	0	0	0	0	0	0
15z(3).	*Troubleshoot/Repair*												
P720	Troubleshoot or repair flow standards	0	0	0	0	8	0	0	19	0	0	0	0
P738	Troubleshoot or repair liquid flowmeters or stands	0	0	0	0	11	0	0	15	0	0	0	0
16b(3).	*Troubleshoot/Repair*												
Q844	Troubleshoot or repair optical mirrors	0	0	0	0	11	3	0	14	0	0	0	0
Q848	Calibrate or align optical pyrometers	0	0	0	0	8	0	0	4	0	0	0	0
17d(3).	*Troubleshoot/Repair*												
R865	Troubleshoot or repair ion-chamber detectors	0	0	7	5	14	0	5	19	0	0	0	0
R867	Troubleshoot or repair ion-chamber dosimeters	0	0	5	2	8	0	3	15	0	0	0	0
18a(2).	*Repair*												
V1059	Troubleshoot or repair BDX-6200	0	0	0	0	2	10	0	0	0	0	0	0
V1060	Calibrate or align BDX-6200	0	0	0	0	0	7	0	0	0	0	0	0
19n(3).	*Calibrate*												
W1172	Calibrate or align RF computer test sets, such as 0Q416AAM82	0	1	0	0	5	13	0	0	0	0	0	0
19o(1).	*Align*												
W1174	Calibrate or align electronic optical computer test sets, such as 0Q422AAM82	0	0	0	0	3	10	0	0	0	0	0	0
20a(2).	*Troubleshoot/Repair*												
X1191	Troubleshoot or repair avionics multiplexers (AMUXs), such as 624-series	0	0	1	0	2	3	11	0	0	0	0	0
21o(2).	*Troubleshoot/Repair*												
U990	Troubleshoot or repair doppler system test sets	0	0	1	3	3	0	0	1	0	0	0	0

TABLE 23

EXAMPLES OF TECHNICAL TASKS PERFORMED BY 20 PERCENT OR MORE GROUP MEMBERS BUT NOT REFERENCED BY STS

TASKS		PERCENT MEMBERS PERFORMING 1ST JOB (N=66)	1ST ENL (N=256)	DAFSC 2P051 (N=663)	DAFSC 2P071 (N=272)
J350	Inspect TMDE for loose or foreign objects	97	90	86	47
J349	Inspect, clean, or replace batteries	88	86	79	38
J347	Inspect or replace common electrical hardware, such as power plugs or fuses	85	80	78	44
J336	Clean TMDE or components using chemicals	83	85	79	37
J348	Inspect or replace common nonelectrical hardware, such as knobs, screws, feet, or cases	79	78	75	40
J339	Clean, treat, or replace filters	58	70	68	31
L445	Calibrate or align RF millivoltmeters	52	45	30	15
L406	Troubleshoot or repair AC/DC analog ammeters	45	33	23	9
K391	Perform analyses of integrated circuit (IC) boards	35	43	48	24
L444	Troubleshoot or repair RF millivoltmeters	30	33	21	10
S889	Calibrate or align DC voltage standards	24	22	21	12
M532	Calibrate or align synthesized signal generators	20	36	42	22
L442	Troubleshoot or repair power supplies	20	21	23	10
N567	Calibrate or align time base PIUs	18	26	27	15
K392	Perform analyses of microwave measurements, such as power, attenuation, or voltage standing wave ratios	17	30	38	21
M528	Calibrate or align square wave generators	17	28	29	14
N570	Troubleshoot or repair vertical PIUs	15	21	22	11
N571	Calibrate or align vertical PIUs	14	24	28	15
O621	Calibrate or align microwave signal generators	12	21	32	17
N566	Troubleshoot or repair time base PIUs	12	18	21	11
M531	Troubleshoot or repair synthesized signal generators	11	22	32	15
K393	Perform analyses of phase-noise measurements	8	23	27	13
M527	Troubleshoot or repair square wave generators	6	19	21	10
O620	Troubleshoot or repair microwave signal generators	3	11	21	12
N569	Calibrate or align spectrum analyzer PIUs	2	15	24	7
T954	Calibrate or align TMDE using phase-noise measurement systems (PNMSs)	2	15	21	10
M461	Troubleshoot or repair audio frequency oscillators	0	15	25	14

Plan of Instruction (POI)

At the same time the STS was matched to the task list, the POI was also matched in the same way. Any POI paragraph or subparagraph with matched tasks performed by 30 percent or more of first-job (1-24 months TAFMS) or first-enlistment (1-48 months TAFMS) members is considered to be supported and should be retained in the POI. As with the STS, there are several cases where the tasks matched to POI items did not have 30 percent members performing in either of these two groups. Table 24 lists those POI items which were not supported by the data. To better examine the POI paragraphs, the tasks matched were divided according to job groups. This analysis resulted in much better support for the POI; all POI items had at least 30 percent members performing for either the first-job or first-enlistment group, or both. Again, however, it must be remembered that some jobs and clusters have very few members.

Tasks not matched to any POI element are listed at the end of the POI computer listing. According to the criteria listed in AETC Instruction 36-2601, tasks with a percent members performing greater than 30 percent for either first-job or first-enlistment personnel should be examined closely for inclusion in the POI. There were a few technical tasks which had greater than 30 percent members performing which were not referenced to the POI. These are listed in Table 25. The majority of the tasks are basic in nature, as reflected by the lower TD ratings. Some tasks may be inherent in other tasks, or may be contained in teaching steps.

JOB SATISFACTION ANALYSIS

An examination of responses to the job satisfaction questions can give career ladder managers a better understanding of some of the factors which may affect the job performance of airmen in the career ladder. The survey booklet included questions covering job interest, perceived utilization of talents and training, sense of accomplishment from work, and reenlistment intentions. The responses of the current survey sample were then analyzed by making several comparisons: (1) among TAFMS groups of the PMEL career ladder and a comparative sample of personnel from other Mission Equipment Management career ladders surveyed in 1995 (AFSCs 2A0X1A, 2A3X1A/B/C, 2E1X2, 2E7X3, and 2M0X3); (2) between current and previous survey experience groups; and (3) across specialty groups identified in the **SPECIALTY JOBS** section of the report.

Table 26 compares first-enlistment (1-48 months TAFMS), second-enlistment (49-96 months TAFMS), and career (97+ months TAFMS) group data to corresponding enlistment groups from other Mission Equipment Management AFSCs surveyed during the previous calendar year. These data give a relative measure of how the job satisfaction of AFSC 2P0X1 personnel compares with similar Air Force specialties. The perceived use of training for all TAFMS groups is higher than the comparative sample. The reenlistment intentions for the first enlistment group, however, is 13 percent lower than the corresponding comparative group. All other job satisfaction indicators are similar to the comparison group.

TABLE 24

POI ITEMS NOT SUPPORTED BY OSR DATA

POI ITEM/TASK	TNG EMP	ATI	% MBRS PERF 1ST JOB	% MBRS PERF 1ST ENL	TSK DIF
2.1. 2e Identify cables and connectors with at least 70 percent accuracy					
J0342 Identify characteristics of radio frequency (RF) cables or connectors	3.70	11	14	19	4.13
2.1 3c Identify the types of hazardous material and procedures for handling, storage, labeling and disposal of hazardous material with a minimum accuracy of 70 percent					
J346 Initiate action for cleanup of hazardous spills	2.81	11	2	5	5.03
J364 Store or dispose of hazardous waste materials	3.04	11	18	19	4.78
2.3 5b Given TMDE and Technical Information troubleshoot a power supply to a faulty component with no more than two instructor assists					
L442 Troubleshoot or repair power supplies	5.51	11	20	21	4.69
2.3 5c Given TMDE and Technical Information troubleshoot a differential voltmeter to a faulty component with no more than two instructor assists					
S912 Troubleshoot or repair differential voltmeters	2.81	11	9	18	5.41
2.4 3c Given TMDE and Technical Information troubleshoot a distortion analyzer with no more than two instructor assists					
N562 Troubleshoot or repair distortion analyzers	4.96	11	9	27	5.32
2.5 1b Given technical data, theoretically troubleshoot a Time Mark Generator to a faulty component with a minimum accuracy of 70 percent					
M537 Troubleshoot or repair time-mark generators	4.68	11	15	27	5.30
2.5 2b Given technical data, theoretically troubleshoot a constant amplitude generator to a faulty component with a minimum accuracy of 70 percent					
M469 Troubleshoot or repair constant amplitude generators	4.18	11	3	16	5.36
2.5 3b Given technical data, theoretically troubleshoot a Pulse Generator to a faulty component with a minimum accuracy of 70 percent					
M517 Troubleshoot or repair pulse generators	3.79	11	6	22	5.38
M481 Troubleshoot or repair fast rise-time generators	3.42	11	6	22	5.56
2.5 4b Given a Constant Amplitude Generator, TMDE and technical data, perform selected calibrations with no more than two assists					
M470 Calibrate or align constant amplitude generators	4.95	11	17	28	4.32

TABLE 24 (CONTINUED)

POI ITEMS NOT SUPPORTED BY OSR DATA

POI ITEM/TASK	TNG EMP	ATI	% MBRS PERF 1ST JOB	% MBRS PERF 1ST ENL	TSK DIF
2.6 1b Given technical data, theoretically troubleshoot an oscilloscope to a faulty stage with a minimum accuracy of 70 percent					
N554 Troubleshoot or repair digital oscilloscopes, other than digital processing oscilloscopes (DPOs)	4.82	11	20	28	6.05
2.6 1c Given TMDE and technical data, troubleshoot the oscilloscope to a faulty stage with no more than two assists					
N554 Troubleshot or repair digital oscilloscopes, other than digital processing oscilloscopes (DPOs)	4.82	11	20	28	6.05
2.8 1d Given TMDE and technical data, troubleshoot the Function Generator to a faulty stage with no more than two assists					
M497 Troubleshoot or repair function generators	5.06	11	15	29	5.30
2.8 3f Given TMDE and technical data, troubleshoot the signal generators a faulty stage with no more than two assists					
M523 Troubleshoot or repair RF signal generators	4.99	11	12	27	5.89
2.9 2c Calibrate a micrometer with no more than two instructor assists					
P749 Calibrate or align micrometers, other than optical micrometer	4.04	11	11	18	3.59
2.9 3c Identify procedures for the calibration of temperature measuring TMDE with a minimum of 70% accuracy					
P703 Calibrate or align digital thermometers	3.44	11	0	11	4.05
P701 Calibrate or align dial thermometers	2.75	9	2	10	3.51
2.9 5a Given a scale and standard weight set and necessary technical data, use the standard weight set to calibrate the scale with no more than two instructor assists					
P745 Calibrate or align mechanical scales	3.66	9	12	21	3.80
3.1 2b Using appropriate references, identify the procedures to initiate a TO improvement report to at least 70% accuracy					
E198 Initiate technical order improvement reports	2.85	9	24	22	3.86

TABLE 25

TECHNICAL TASKS PERFORMED BY 30 PERCENT OR MORE GROUP MEMBERS BUT NOT REFERENCED BY POI

		TNG EMP	ATI	% MBRS PERF 1ST JOB	1ST ENL	TSK DIF
K373	Compute limited certification values or ranges	5.36	18	67	68	4.14
K368	Calculate current, voltage, impedance, reactance, resistance, capacitance, or power parameters	5.62	18	61	58	4.54
J357	Repair damaged sections of single-layer circuit cards, such as cracks or damaged runs, using soldering irons	4.81	18	55	57	4.76
J362	Solder or desolder discrete circuit components, such as resistors or ESDs, on multilayer circuit boards	4.12	18	42	51	5.07
J350	Inspect TMDE for loose or foreign objects	4.78	13	97	90	1.75
J349	Inspect, clean, or replace batteries	3.85	13	88	86	2.03
J361	Solder or desolder discrete circuit components, such as resistors or ESDs, on single-layer circuit boards	5.44	13	85	86	3.81
J347	Inspect or replace common electrical hardware, such as power plugs or fuses	5.28	13	85	80	2.69
J336	Clean TMDE or components using chemicals	3.99	13	83	85	2.83
J348	Inspect or replace common nonelectrical hardware, such as knobs, screws, feet, or cases	3.71	13	79	78	2.14
K385	Convert between time and frequencies	4.71	13	65	60	3.16
J339	Clean, treat, or replace filters	3.64	13	58	70	1.89
L412	Troubleshoot or repair AC/DC analog voltmeters	4.95	12	48	42	4.49
K396	Perform analyses of signals using time-domain TMDE	5.22	12	30	34	4.90
L444	Troubleshoot or repair RF millivoltmeters	3.65	12	30	33	5.03
J360	Set up electrostatic sensitive device (ESD) stations	3.60	12	27	32	4.14
N552	Troubleshoot or repair analog oscilloscopes	4.99	12	27	30	5.11
J356	Repair damaged sections of single-layer circuit cards, such as cracks or damaged runs, using Pace system	4.68	12	21	33	4.84
M532	Calibrate or align synthesized signal generators	5.46	12	20	36	5.38
O617	Calibrate or align microwave frequency counters, such as continuous wave or pulse	4.16	12	18	30	4.86
K392	Perform analyses of microwave measurements, such as power, attenuation, or voltage standing wave ratios	4.99	12	17	30	5.58
L436	Troubleshoot or repair ohmmeters	4.10	11	32	28	4.17
L413	Calibrate or align AC/DC analog voltmeters	4.96	10	53	44	3.73
L433	Calibrate or align power meters	4.50	10	52	44	3.82
L437	Calibrate or align ohmmeters	4.03	10	52	40	3.39
L419	Calibrate or align clamp-on voltammeters	3.15	10	45	34	3.33
P799	Troubleshoot or repair torque wrenches	4.96	10	41	46	3.61
J354	Perform PMIs on TMDE	3.00	10	41	45	3.09
K379	Construct calibration correction charts or graphs	5.10	10	36	44	3.96
L435	Calibrate or align megohmmeters	2.76	9	36	24	3.69
F247	Inventory CTKs	2.36	8	48	51	2.09
L405	Calibrate or align capacitance meters	2.34	7	32	22	4.44
L453	Calibrate or align voltage probes	2.17	3	39	26	3.56

TABLE 26

JOB SATISFACTION INDICATORS FOR AFSC 2P0X1 TAFMS GROUPS
(PERCENT MEMBERS RESPONDING)

	1-48 MONTHS TAFMS		49-96 MONTHS TAFMS		97+ MONTHS TAFMS	
	AFSC 2P0X1 (N=255)	COMP SAMPLE (N=1,280)	AFSC 2P0X1 (N=216)	COMP SAMPLE (N=805)	AFSC 2P0X1 (N=668)	COMP SAMPLE (N=1,693)
EXPRESSED JOB INTEREST:						
INTERESTING	78	74	76	73	77	75
SO-SO	15	15	11	17	13	15
DULL	7	11	12	10	10	9
PERCEIVED USE OF TALENTS:						
FAIRLY WELL TO VERY WELL	88	81	85	82	87	83
NONE TO VERY LITTLE	11	19	14	18	13	17
PERCEIVED USE OF TRAINING:						
FAIRLY WELL TO PERFECT	95	86	93	82	85	76
NONE TO VERY LITTLE	4	14	7	17	15	24
SENSE OF ACCOMPLISHMENT FROM JOB:						
SATISFIED	79	58	70	71	69	73
NEUTRAL	13	42	12	28	11	10
DISSATISFIED	9	*	18	*	20	16
REENLISTMENT INTENTIONS:						
YES OR PROBABLY YES	59	72	67	71	79	72
NO OR PROBABLY NO	41	13	33	11	6	9
WILL RETIRE	0	15	0	17	14	19

* Less than 1 percent

NOTE: Columns may not add to 100 percent due to rounding or nonresponse
Comparative data are from AFSCs 2A0X1A, 2A3X1A/B/C, 2E1X2, 2E7X3, and 2M0X3 surveyed in 1995

Comparison of job satisfaction indicator responses of the current survey TAFMS groups to TAFMS groups for the previous survey (see Table 27) indicates that the 1996 responses are generally comparable to the 1990 responses. The perceived use of training, while higher than comparable career ladders, is consistent with past results. The lower reenlistment intentions expressed by the 1-48 months TAFMS group is actually 4 percent higher than in the previous survey.

An examination of job satisfaction data can also reveal the influences performing certain jobs may have on overall job satisfaction. Table 28 presents job satisfaction data for the jobs identified in the career ladder structure for AFSC 2P0X1. One cluster, Production Control, was lower than the other jobs on four of the five job satisfaction indicators. The 13 members of this cluster are similar to the other jobs and clusters in terms of seniority, location, and number of tasks performed. Analysis of the write-in comments also did not offer any explanation for their expressed dissatisfaction. Two jobs, Supply and PAMS, expressed lower perceived use of training. These two jobs do not involve work with much equipment, and members may feel their ability to align, calibrate, and repair equipment is under used in their current jobs.

IMPLICATIONS

As explained in the **INTRODUCTION**, this survey was conducted primarily to provide training personnel with current information on the Precision Measurement Equipment Laboratory career ladder for use in reviewing current training programs and training documents. Overall job progression is normal and shows a distinct pattern as one moves from the 3- to 9-skill and CEM-level. The AFMAN 36-2108 *Specialty Description* broadly describes the jobs and tasks being performed. Job satisfaction is fairly high, and no serious problem areas were noted. Analysis of career ladder documents indicates the STS and POI have a few areas which should be examined for possible revision. The diverse nature of the career ladder and the large number of equipment items supported are partially to blame for the lack of support for the STS and POI.

TABLE 27

COMPARISON OF JOB SATISFACTION INDICATORS FOR AFSC 2P0X1
TAFMS GROUPS IN CURRENT STUDY TO PREVIOUS STUDY
(PERCENT MEMBERS RESPONDING)

	1-48 MONTHS TAFMS		49-96 MONTHS TAFMS		97+ MONTHS TAFMS	
	1996 2P0X1 (N=255)	1990 324X0 (N=811)	1996 2P0X1 (N=216)	1990 324X0 (N=492)	1996 2P0X1 (N=668)	1990 324X0 (N=600)
EXPRESSED JOB INTEREST:						
INTERESTING	78	86	76	86	77	85
SO-SO	15	8	11	9	13	9
DULL	7	5	12	4	10	4
PERCEIVED USE OF TALENTS:						
FAIRLY WELL TO PERFECT	88	90	85	90	87	90
NONE TO VERY LITTLE	11	9	14	9	13	9
PERCEIVED USE OF TRAINING:						
FAIRLY WELL TO PERFECT	95	94	93	92	85	86
NONE TO VERY LITTLE	4	6	7	8	15	13
SENSE OF ACCOMPLISHMENT FROM JOB:						
SATISFIED	79	80	70	75	69	77
NEUTRAL	13	9	12	9	11	8
DISSATISFIED	9	10	18	15	20	14
REENLISTMENT INTENTIONS:						
YES OR PROBABLY YES	59	55	67	57	79	75
NO OR PROBABLY NO	41	44	33	42	6	10
WILL RETIRE	0	*	0	*	14	14

* Less than 1 percent

NOTE: Columns may not add to 100 percent due to rounding or nonresponse

TABLE 28

JOB SATISFACTION INDICATORS FOR AFSC 2P0X1 JOB GROUPS
(PERCENT MEMBERS RESPONDING)

	TACAN/ IFF (STG220)	VOLTAGE, CURRENT, & RESISTANCE (STG167)	ELECTRICAL CONSOLES (STG179)	FREQ GEN & WAVEFORM (STG069)	QPE (GP036)
EXPRESSED JOB INTEREST:					
INTERESTING	100	72	78	81	89
SO-SO	0	15	16	11	6
DULL	0	13	6	7	5
PERCEIVED USE OF TALENTS:					
FAIRLY WELL TO PERFECT	100	78	93	88	96
NONE TO VERY LITTLE	0	22	7	11	5
PERCEIVED USE OF TRAINING:					
FAIRLY WELL TO PERFECT	100	97	91	90	97
NONE TO VERY LITTLE	0	3	8	10	3
SENSE OF ACCOMPLISHMENT FROM JOB:					
SATISFIED	100	75	75	75	72
NEUTRAL	0	12	11	12	8
DISSATISFIED	0	13	14	13	19
REENLISTMENT INTENTIONS:					
YES OR PROBABLY YES	71	61	80	70	88
NO OR PROBABLY NO	29	39	18	27	5
WILL RETIRE	0	0	2	3	8

NOTE: Columns may not add to 100 percent due to rounding or nonresponse

TABLE 28 (CONTINUED)

JOB SATISFACTION INDICATORS FOR AFSC 2P0X1 JOB GROUPS
(PERCENT MEMBERS RESPONDING)

	F-15 UNIQUE (STG114)	SECTION SUPERVISOR (STG086)	F-16 UNIQUE (STG072)	PHYSICAL - DIMENSIONAL (STG087)	TRAINING (STG096)
EXPRESSED JOB INTEREST:					
INTERESTING	80	68	65	79	75
SO-SO	10	12	14	15	15
DULL	10	20	22	6	10
PERCEIVED USE OF TALENTS:					
FAIRLY WELL TO PERFECT	100	88	73	88	95
NONE TO VERY LITTLE	0	12	27	11	5
PERCEIVED USE OF TRAINING:					
FAIRLY WELL TO PERFECT	97	80	89	93	90
NONE TO VERY LITTLE	3	20	11	6	10
SENSE OF ACCOMPLISHMENT FROM JOB:					
SATISFIED	77	60	57	70	70
NEUTRAL	10	4	14	17	5
DISSATISFIED	13	36	30	12	25
REENLISTMENT INTENTIONS:					
YES OR PROBABLY YES	87	84	86	78	80
NO OR PROBABLY NO	10	12	11	18	10
WILL RETIRE	3	4	3	3	10

NOTE: Columns may not add to 100 percent due to rounding or nonresponse

TABLE 28 (CONTINUED)

JOB SATISFACTION INDICATORS FOR AFSC 2P0X1 JOB GROUPS
(PERCENT MEMBERS RESPONDING)

	SUPPLY (STG279)	SUPERVISION (STG074)	TOs (STG151)	PRODUCTION CONTROL (STG057)	PAMS (ST0218)
EXPRESSED JOB INTEREST:					
INTERESTING	60	77	60	31	50
SO-SO	0	14	20	23	25
DULL	40	9	20	46	25
PERCEIVED USE OF TALENTS:					
FAIRLY WELL TO PERFECT	80	89	80	39	75
NONE TO VERY LITTLE	20	11	20	62	25
PERCEIVED USE OF TRAINING:					
FAIRLY WELL TO PERFECT	20	80	80	46	50
NONE TO VERY LITTLE	80	20	20	54	42
SENSE OF ACCOMPLISHMENT FROM JOB:					
SATISFIED	80	69	60	31	50
NEUTRAL	0	9	20	0	0
DISSATISFIED	20	22	20	69	50
REENLISTMENT INTENTIONS:					
YES OR PROBABLY YES	80	62	60	54	50
NO OR PROBABLY NO	0	4	40	46	0
WILL RETIRE	20	34	0	0	42

NOTE: Columns may not add to 100 percent due to rounding or nonresponse

APPENDIX A

SELECTED REPRESENTATIVE TASKS PERFORMED BY MEMBERS OF CAREER LADDER JOBS

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TABLE A1

TACAN AND IFF EQUIPMENT JOB
Number of Members: 7 STG220

TASKS		PERCENT MEMBERS PERFORMING
U1009	Calibrate or align IFF or SIF transponder test sets	100
U1008	Troubleshoot or repair identification friend or foe (IFF) or selective identification feature (SIF) transponder test sets	100
J350	Inspect TMDE for loose or foreign objects	100
J361	Solder or desolder discrete circuit components, such as resistors or ESDs, on single-layer circuit boards	100
U1048	Calibrate or align TACAN related test equipment, other than navigational test sets	86
U1047	Troubleshoot or repair tactical air navigation (TACAN) related test equipment, other than navigational test sets	86
K381	Convert between logarithmic and linear power levels, such as dBm or milliwatts	86
K373	Compute limited certification values or ranges	86
K368	Calculate current, voltage, impedance, reactance, resistance, capacitance, or power parameters	86
K385	Convert between time and frequencies	86
U968	Calibrate or align airborne navigational aid test sets	71
U1017	Calibrate or align ILS/VOR test equipment	71
U1016	Troubleshoot or repair instrument landing system/variable omnirange (ILS/VOR) test equipment	71
U967	Troubleshoot or repair airborne navigational aid test sets	71
J351	Perform calculations using scientific calculators	71
K392	Perform analyses of microwave measurements, such as power, attenuation, or voltage standing wave ratios	71
K387	Interpolate readings, charts, or graphs	71
F268	Research technical orders to identify components or items of equipment	71
J354	Perform PMIs on TMDE	71
K391	Perform analyses of integrated circuit (IC) boards	71
J339	Clean, treat, or replace filters	71
J347	Inspect or replace common electrical hardware, such as power plugs or fuses	71
K367	Calculate age or drift rates	71
J348	Inspect or replace common nonelectrical hardware, such as knobs, screws, feet, or cases	71
J345	Identify substitutes for unavailable standards or equipment	57
F247	Inventory CTKs	57
K379	Construct calibration correction charts or graphs	57
K396	Perform analyses of signals using time-domain TMDE	57
K374	Compute percents of modulations	57
N563	Calibrate or align distortion analyzers	57

TABLE A2

VOLTAGE, CURRENT, & RESISTANCE JOB
Number of Members: 67 STG167

TASKS		PERCENT MEMBERS PERFORMING
L409	Calibrate or align analog passive multimeters or accessories	100
L408	Troubleshoot or repair analog passive multimeters or accessories	97
J361	Solder or desolder discrete circuit components, such as resistors or ESDs, on single-layer circuit boards	94
J350	Inspect TMDE for loose or foreign objects	93
J349	Inspect, clean, or replace batteries	93
L411	Calibrate or align analog active voltmeters	93
L413	Calibrate or align AC/DC analog voltmeters	91
L410	Troubleshoot or repair analog active voltmeters	90
J351	Perform calculations using scientific calculators	90
J347	Inspect or replace common electrical hardware, such as power plugs or fuses	88
J336	Clean TMDE or components using chemicals	87
J348	Inspect or replace common nonelectrical hardware, such as knobs, screws, feet, or cases	84
L412	Troubleshoot or repair AC/DC analog voltmeters	84
L407	Calibrate or align AC/DC analog ammeters	84
L437	Calibrate or align ohmmeters	84
L419	Calibrate or align clamp-on voltammeters	84
L445	Calibrate or align RF millivoltmeters	81
L406	Troubleshoot or repair AC/DC analog ammeters	79
K373	Compute limited certification values or ranges	76
K368	Calculate current, voltage, impedance, reactance, resistance, capacitance, or power parameters	76
L433	Calibrate or align power meters	73
J345	Identify substitutes for unavailable standards or equipment	70
J339	Clean, treat, or replace filters	70
L444	Troubleshoot or repair RF millivoltmeters	67
S917	Calibrate or align low-accuracy digital multimeters	66
K390	Perform analyses of basic DC circuits	64
K389	Perform analyses of basic AC circuits	64
L405	Calibrate or align capacitance meters	64
J357	Repair damaged sections of single-layer circuit cards, such as cracks or damaged runs, using soldering irons	64
S915	Calibrate or align digital multimeters, other than low-accuracy or test station digital multimeters	61
S916	Troubleshoot or repair low-accuracy digital multimeters	61
L436	Troubleshoot or repair ohmmeters	60
L453	Calibrate or align voltage probes	58
L418	Troubleshoot or repair clamp-on voltammeters	58

TABLE A3

ELECTRICAL MEASUREMENT CONSOLES JOB
Number of Members: 85 STG179

TASKS		PERCENT MEMBERS PERFORMING
S889	Calibrate or align DC voltage standards	99
S885	Calibrate or align AC voltage dividers	99
S915	Calibrate or align digital multimeters, other than low-accuracy or test station digital multimeters	98
S917	Calibrate or align low-accuracy digital multimeters	98
S877	Calibrate or align AC voltage standards	98
J349	Inspect, clean, or replace batteries	98
S881	Calibrate or align AC/DC instrument calibrators	96
S907	Calibrate or align decade resistors	96
S913	Calibrate or align differential voltmeters	95
S916	Troubleshoot or repair low-accuracy digital multimeters	95
S887	Calibrate or align DC voltage dividers	95
S914	Troubleshoot or repair digital multimeters, other than low-accuracy or test station digital multimeters	94
J350	Inspect TMDE for loose or foreign objects	94
J347	Inspect or replace common electrical hardware, such as power plugs or fuses	93
J361	Solder or desolder discrete circuit components, such as resistors or ESDs, on single-layer circuit boards	93
J336	Clean TMDE or components using chemicals	92
S925	Calibrate or align standard resistors, other than current shunts	89
S927	Calibrate or align null detectors	89
J348	Inspect or replace common nonelectrical hardware, such as knobs, screws, feet, or cases	89
J351	Perform calculations using scientific calculators	88
S911	Calibrate or align decade voltage dividers	88
K368	Calculate current, voltage, impedance, reactance, resistance, capacitance, or power parameters	87
J339	Clean, treat, or replace filters	87
K373	Compute limited certification values or ranges	86
L409	Calibrate or align analog passive multimeters or accessories	86
S876	Troubleshoot or repair AC voltage standards	86
L408	Troubleshoot or repair analog passive multimeters or accessories	86
S880	Troubleshoot or repair AC/DC instrument calibrators	85
L413	Calibrate or align AC/DC analog voltmeters	84
L445	Calibrate or align RF millivoltmeters	84
S879	Calibrate or align AC/DC generator/detectors	84
S888	Troubleshoot or repair DC voltage standards	82
L412	Troubleshoot or repair AC/DC analog voltmeters	82
S912	Troubleshoot or repair differential voltmeters	82

TABLE A4

FREQUENCY GENERATING & WAVEFORM ANALYZING EQUIPMENT CLUSTER
Number of Members: 317 STG069

TASKS		PERCENT MEMBERS PERFORMING
J361	Solder or desolder discrete circuit components, such as resistors or ESDs, on single-layer circuit boards	97
J350	Inspect TMDE for loose or foreign objects	95
J351	Perform calculations using scientific calculators	94
J347	Inspect or replace common electrical hardware, such as power plugs or fuses	89
J348	Inspect or replace common nonelectrical hardware, such as knobs, screws, feet, or cases	89
J349	Inspect, clean, or replace batteries	88
J336	Clean TMDE or components using chemicals	87
K373	Compute limited certification values or ranges	85
M498	Calibrate or align function generators	85
M538	Calibrate or align time-mark generators	83
N563	Calibrate or align distortion analyzers	83
J339	Clean, treat, or replace filters	83
K385	Convert between time and frequencies	82
M524	Calibrate or align RF signal generators	82
M532	Calibrate or align synthesized signal generators	82
M480	Calibrate or align electronic counters or PIUs	77
K368	Calculate current, voltage, impedance, reactance, resistance, capacitance, or power parameters	75
K395	Perform analyses of signals using frequency-domain TMDE	74
K367	Calculate age or drift rates	74
M482	Calibrate or align fast rise-time generators	74
J345	Identify substitutes for unavailable standards or equipment	73
N553	Calibrate or align analog oscilloscopes	73
K389	Perform analyses of basic AC circuits	73
K390	Perform analyses of basic DC circuits	72
M523	Troubleshoot or repair RF signal generators	72
M518	Calibrate or align pulse generators	72
K392	Perform analyses of microwave measurements, such as power, attenuation, or voltage standing wave ratios	71
J357	Repair damaged sections of single-layer circuit cards, such as cracks or damaged runs, using soldering irons	71
K396	Perform analyses of signals using time-domain TMDE	71
M497	Troubleshoot or repair function generators	71
M479	Troubleshoot or repair electronic counters or plug-in units (PIUs)	70
K381	Convert between logarithmic and linear power levels, such as dBm or milliwatts	69
M531	Troubleshoot or repair synthesized signal generators	69
N555	Calibrate or align digital oscilloscopes, other than DPOs	68

TABLE A5

QUALITY PROCESS EVALUATOR CLUSTER
Number of Members: 64 GP036

TASKS		PERCENT MEMBERS PERFORMING
G288	Perform TMDE quality process reviews (QPRs)	89
G286	Perform in-process reviews (IPRs) of PMEL processes	89
G289	Perform working standards reviews (WSRs)	86
G280	Evaluate technical order improvement reports	86
J350	Inspect TMDE for loose or foreign objects	86
G283	Interpret TMDE calibration procedures for PMEL technicians or OWCs	84
L409	Calibrate or align analog passive multimeters or accessories	73
G278	Conduct quality assurance (QA) briefings for newly assigned personnel	72
L433	Calibrate or align power meters	72
J351	Perform calculations using scientific calculators	70
A30	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	69
K368	Calculate current, voltage, impedance, reactance, resistance, capacitance, or power parameters	69
P800	Calibrate or align torque wrenches	69
L413	Calibrate or align AC/DC analog voltmeters	69
N563	Calibrate or align distortion analyzers	69
G284	Maintain environmental logs and charts	67
D134	Conduct on-the-job training (OJT)	67
C123	Write EPRs	67
O617	Calibrate or align microwave frequency counters, such as continuous wave or pulse	66
L411	Calibrate or align analog active voltmeters	66
M538	Calibrate or align time-mark generators	66
O633	Calibrate or align power sensors	66
C103	Evaluate personnel for compliance with performance standards	64
C86	Conduct performance feedback evaluation sessions	64
K373	Compute limited certification values or ranges	64
M480	Calibrate or align electronic counters or PIUs	64
M532	Calibrate or align synthesized signal generators	64
L445	Calibrate or align RF millivoltmeters	64
C105	Evaluate PMEL maintenance procedures	63
P687	Calibrate or align bourdon tube-type gauges	63
P733	Calibrate or align humidigraphs or hygrothermographs	63
M470	Calibrate or align constant amplitude generators	63
J345	Identify substitutes for unavailable standards or equipment	61
J347	Inspect or replace common electrical hardware, such as power plugs or fuses	61

TABLE A6

F-15 UNIQUE EQUIPMENT MAINTENANCE CLUSTER
Number of Members: 30 STG114

TASKS		PERCENT MEMBERS PERFORMING
V1093	Troubleshoot or repair SWDSs	97
V1094	Calibrate or align SWDSs	97
J350	Inspect TMDE for loose or foreign objects	97
J361	Solder or desolder discrete circuit components, such as resistors or ESDs, on single-layer circuit boards	97
V1123	Troubleshoot or repair test station frequency counters, such as 2129607 or 2129608	93
V1124	Calibrate or align test station frequency counters, such as 2129607 or 2129608	93
J347	Inspect or replace common electrical hardware, such as power plugs or fuses	93
V1132	Calibrate or align avionics test station spectrum analyzers, such as 1993213 or 3598942	90
V1131	Troubleshoot or repair avionics test station spectrum analyzers, such as 1993213 or 3598942	90
J348	Inspect or replace common nonelectrical hardware, such as knobs, screws, feet, or cases	90
K390	Perform analyses of basic DC circuits	90
K389	Perform analyses of basic AC circuits	90
J336	Clean TMDE or components using chemicals	90
J357	Repair damaged sections of single-layer circuit cards, such as cracks or damaged runs, using soldering irons	90
J349	Inspect, clean, or replace batteries	90
T951	Troubleshoot or repair avionics systems test stations using TMDE	87
T952	Calibrate or align avionics systems test stations using TMDE	87
V1121	Troubleshoot or repair test station digital multimeters, such as 1993101	87
V1122	Calibrate or align test station digital multimeters, such as 1993101	87
J345	Identify substitutes for unavailable standards or equipment	87
V1112	Calibrate or align IFSSs	87
J351	Perform calculations using scientific calculators	87
F247	Inventory CTKs	87
J339	Clean, treat, or replace filters	87
D134	Conduct on-the-job training (OJT)	83
V1105	Troubleshoot or repair aircraft weapons control test sets, such as AE24T-169	83
V1076	Calibrate or align microwave noise analyzers	83
K391	Perform analyses of integrated circuit (IC) boards	83
K385	Convert between time and frequencies	83
T958	Calibrate or align TMDE using PATECs	80
V1111	Troubleshoot or repair intermediate frequency signal sources (IFSSs)	80
V1088	Calibrate or align station programmable waveform generators	80

TABLE A7

SECTION SUPERVISOR CLUSTER
Number of Members: 25 STG086

TASKS		PERCENT MEMBERS PERFORMING
J350	Inspect TMDE for loose or foreign objects	96
J361	Solder or desolder discrete circuit components, such as resistors or ESDs, on single-layer circuit boards	96
J347	Inspect or replace common electrical hardware, such as power plugs or fuses	96
C123	Write EPRs	88
J336	Clean TMDE or components using chemicals	88
J351	Perform calculations using scientific calculators	88
J349	Inspect, clean, or replace batteries	88
F247	Inventory CTKs	84
D134	Conduct on-the-job training (OJT)	76
F267	Research supply requisition data, such as supply catalogs or federal logistics (FEDLOG)	76
J345	Identify substitutes for unavailable standards or equipment	76
J348	Inspect or replace common nonelectrical hardware, such as knobs, screws, feet, or cases	76
J339	Clean, treat, or replace filters	76
C86	Conduct performance feedback evaluation sessions	72
K373	Compute limited certification values or ranges	72
B81	Supervise PMEL Journeymen (AFSC 2P051)	68
A30	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	68
C125	Write recommendations for awards or decorations	68
J354	Perform PMIs on TMDE	68
A24	Establish performance standards for subordinates	64
D161	Evaluate progress of trainees	64
C115	Inspect personnel for compliance with military standards	64
K390	Perform analyses of basic DC circuits	64
K389	Perform analyses of basic AC circuits	64
F245	Inspect consolidated tool kits (CTKs)	64
F221	Attach or annotate equipment status labels or tags, such as DD Forms 1574 (Serviceable Tag-Materiel)	64
D171	Review STSs	60
K385	Convert between time and frequencies	60
K368	Calculate current, voltage, impedance, reactance, resistance, capacitance, or power parameters	60
D168	Maintain training records, charts, graphs, or files	56
B80	Supervise PMEL Apprentices (AFSC 2P031)	56
F268	Research technical orders to identify components or items of equipment	56
K395	Perform analyses of signals using frequency-domain TMDE	56
E198	Initiate technical order improvement reports	56

TABLE A8

F-16 UNIQUE EQUIPMENT MAINTENANCE CLUSTER
Number of Members: 37 STG072

TASKS		PERCENT MEMBERS PERFORMING
X1206	Calibrate or align SMSs, such as 16U75501-series	100
X1205	Troubleshoot or repair STORES management systems (SMSs), such as 16U75501-series	97
X1204	Calibrate or align preload armament circuit test sets, such as 16U75060-series	95
X1203	Troubleshoot or repair preload armament circuit test sets, such as 16U75060-series	92
J350	Inspect TMDE for loose or foreign objects	89
X1208	Calibrate or align SMSs breakout boxes, such as 16UE75517-series	89
X1209	Troubleshoot or repair STORES release equipment (SRE), such as 16U75500-series	89
X1210	Calibrate or align SRE, such as 16U75500-series	86
J349	Inspect, clean, or replace batteries	84
J347	Inspect or replace common electrical hardware, such as power plugs or fuses	84
J351	Perform calculations using scientific calculators	81
X1207	Troubleshoot or repair SMSs breakout boxes, such as 16UE75517-series	81
J361	Solder or desolder discrete circuit components, such as resistors or ESDs, on single-layer circuit boards	81
J348	Inspect or replace common nonelectrical hardware, such as knobs, screws, feet, or cases	81
X1194	Calibrate or align chaff/flares dispenser test sets, such as AN/ALM-177-series	78
J336	Clean TMDE or components using chemicals	76
X1222	Calibrate or align engine warning test sets	73
K373	Compute limited certification values or ranges	73
X1193	Troubleshoot or repair chaff/flares dispenser test sets, such as AN/ALM-177-series	73
K390	Perform analyses of basic DC circuits	73
X1196	Calibrate or align EPUs, such as 912476-series	70
X1212	Calibrate or align electrical engine test sets	68
D134	Conduct on-the-job training (OJT)	68
K389	Perform analyses of basic AC circuits	68
X1221	Troubleshoot or repair engine warning test sets	65
F247	Inventory CTKs	65
X1211	Troubleshoot or repair electrical engine test sets	62
X1195	Troubleshoot or repair emergency power units (EPUs), such as 912476-series	62
J339	Clean, treat, or replace filters	62
J345	Identify substitutes for unavailable standards or equipment	59

TABLE A9

PHYSICAL AND DIMENSIONAL EQUIPMENT CLUSTER
Number of Members: 17 STG087

TASKS		PERCENT MEMBERS PERFORMING
J336	Clean TMDE or components using chemicals	95
J350	Inspect TMDE for loose or foreign objects	92
J351	Perform calculations using scientific calculators	91
P687	Calibrate or align bourdon tube-type gauges	89
P699	Calibrate or align dial indicators	89
P717	Calibrate or align electronic scales	89
K384	Convert between temperature scales, such as Fahrenheit, Celsius, Kelvin, or Rankine	88
J349	Inspect, clean, or replace batteries	88
P745	Calibrate or align mechanical scales	86
K370	Compute absolute, gauge, or differential pressures	86
P749	Calibrate or align micrometers, other than optical micrometers	84
K373	Compute limited certification values or ranges	84
P733	Calibrate or align humidigraphs or hygrothermographs	84
P773	Calibrate or align push-pull gauges	84
P686	Troubleshoot or repair bourdon tube-type gauges	83
P800	Calibrate or align torque wrenches	82
J347	Inspect or replace common electrical hardware, such as power plugs or fuses	82
P664	Calibrate or align aircraft weighing kits	78
P691	Calibrate or align combustible or toxic gas analyzers or alarms	78
P703	Calibrate or align digital thermometers	76
P802	Calibrate or align vernier calipers	76
J348	Inspect or replace common nonelectrical hardware, such as knobs, screws, feet, or cases	76
K380	Convert between degrees, minutes, or seconds	75
P763	Calibrate or align pressure relief valves	75
P716	Troubleshoot or repair electronic scales	75
J361	Solder or desolder discrete circuit components, such as resistors or ESDs, on single-layer circuit boards	75
P690	Troubleshoot or repair combustible or toxic gas analyzers or alarms	73
P701	Calibrate or align dial thermometers	73
P744	Troubleshoot or repair mechanical scales	73
K379	Construct calibration correction charts or graphs	73
F247	Inventory CTKs	72
P765	Calibrate or align pressure standards	72
P693	Calibrate or align dead-weight testers	72
K383	Convert between Metric and English measures	72

TABLE A10

TRAINING CLUSTER
Number of Members: 20 STG096

TASKS		PERCENT MEMBERS PERFORMING
D140	Construct tests or examinations, other than for upgrade training	95
D128	Administer or score tests	95
D175	Write test questions	95
D141	Counsel trainees on training progress	95
D142	Design visual or graphic training aids	95
D152	Develop lesson plans	90
D139	Construct or develop training materials or aids	90
D136	Conduct resident course classroom training	70
D161	Evaluate progress of trainees	70
D148	Develop formal course curricula, plans of instructions (POIs), or specialty training standards (STSs)	65
D135	Conduct remedial study classes	65
A30	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	65
C115	Inspect personnel for compliance with military standards	50
K390	Perform analyses of basic DC circuits	50
K389	Perform analyses of basic AC circuits	50
K387	Interpolate readings, charts, or graphs	50
F267	Research supply requisition data, such as supply catalogs or federal logistics (FEDLOG)	50
B49	Counsel subordinates concerning personal matters	50
D170	Procure training aids, space, or equipment	45
K391	Perform analyses of integrated circuit (IC) boards	40
K397	Perform analyses of solid-state circuits	40
J351	Perform calculations using scientific calculators	40
D162	Evaluate training methods and techniques	35
D159	Evaluate or inspect training materials or aids for operation or suitability	35
K368	Calculate current, voltage, impedance, reactance, resistance, capacitance, or power parameters	35
K396	Perform analyses of signals using time-domain TMDE	35
K385	Convert between time and frequencies	35
D168	Maintain training records, charts, graphs, or files	35
F221	Attach or annotate equipment status labels or tags, such as DD Forms 1574 (Serviceable Tag-Materiel)	35
D132	Complete student withdrawal or entry forms	30
F258	Maintain property custodian authorization/custody receipt listings (CA/CRLs)	30
K395	Perform analyses of signals using frequency-domain TMDE	30
F238	Draft or write requisitions for equipment, tools, or supplies, other than for local purchase	30

TABLE A11

SUPPLY JOB
Number of Members: 5 STG279

TASKS		PERCENT MEMBERS PERFORMING
F258	Maintain property custodian authorization/custody receipt listings (CA/CRLs)	100
F267	Research supply requisition data, such as supply catalogs or federal logistics (FEDLOG)	100
F248	Inventory equipment, tools, or supplies, other than CTKs	100
F238	Draft or write requisitions for equipment, tools, or supplies, other than for local purchase	100
F221	Attach or annotate equipment status labels or tags, such as DD Forms 1574 (Serviceable Tag-Materiel)	100
F275	Validate supply transaction listings or rosters, such as D-04, D-18, or M-30	80
F231	Coordinate turn-in of excess or surplus property with base or other agencies	80
F242	Evaluate changes in equipment allowances or authorizations	80
F250	Issue or log turn-ins of equipment, tools, or supplies, other than CTKs	80
C106	Evaluate procedures for storage, inventory, or inspection of property items	80
B53	Draft recommendations for policy changes in logistic requirements, such as personnel, equipment, space, or supplies	80
F226	Coordinate local purchase of equipment or supplies with appropriate agencies	80
F236	Draft or write letters of justification for supply-related matters	80
B51	Direct inventories of TMDE	60
C114	Inspect new equipment	60
F222	Certify status of reparable, serviceable, or condemned parts or TMDE	60
F230	Coordinate technical assistance requirements with AGMC, manufacturers, or other PMELs	60
F229	Coordinate requisition of equipment with appropriate agencies, such as OWCs	60

TABLE A12

SUPERVISION CLUSTER
Number of Members: 13 STG074

TASKS		PERCENT MEMBERS PERFORMING
B49	Counsel subordinates concerning personal matters	98
C123	Write EPRs	96
A30	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	96
C125	Write recommendations for awards or decorations	95
C86	Conduct performance feedback evaluation sessions	95
C115	Inspect personnel for compliance with military standards	89
A24	Establish performance standards for subordinates	88
C103	Evaluate personnel for compliance with performance standards	88
B82	Supervise PMEL Craftsmen (AFSC 2P071)	86
A1	Assign personnel to work areas or duty positions	85
A41	Schedule personnel for temporary duty (TDY) assignments, leaves, or passes	84
B48	Conduct supervisory orientations for newly assigned personnel	83
C104	Evaluate personnel for promotion, demotion, reclassification, or special awards	82
B67	Initiate actions required due to substandard performance of personnel	79
A36	Plan or schedule work assignments or priorities	78
A28	Establish work schedules	78
B73	Interpret policies, directives, or procedures for subordinates	77
B81	Supervise PMEL Journeymen (AFSC 2P051)	73
C84	Analyze workload requirements	73
C111	Evaluate work schedules	73
B66	Implement work methods, controls, or procedures	71
C105	Evaluate PMEL maintenance procedures	70
A5	Determine logistics requirements, such as personnel, equipment, space, or supplies	69
C113	Indorse enlisted performance reports (EPRs)	67
B45	Adjust daily maintenance plans to meet operation commitments	67
A2	Assign sponsors for newly assigned personnel	67
B50	Direct development or maintenance of status indicators, such as boards, graphs, or charts	66
C100	Evaluate logistics requirements, such as personnel, equipment, space, tools, or supplies	64
A11	Develop organizational or functional charts	64
B47	Conduct general staff meetings or briefings	62
D161	Evaluate progress of trainees	62
B52	Direct maintenance or utilization of equipment, supplies, tools, or workspace	62
C88	Conduct self-assessments or self-inspections	62
D168	Maintain training records, charts, graphs, or files	61

TABLE A13

TECHNICAL ORDER JOB
Number of Members: 5 STG151

TASKS		PERCENT MEMBERS PERFORMING
E202	Maintain automated technical order management system (ATOMS) accounts	100
E207	Maintain technical order distribution offices (TODOs)	100
E208	Maintain technical order libraries	100
E209	Maintain time compliance technical orders (TCTOs)	100
A6	Determine or establish publication requirements	60
E205	Maintain publication libraries, other than technical order libraries	60
E217	Review technical order changes	60
E196	Establish technical order accounts	40
E219	Verify receipt of TCTO changes	40
F269	Schedule TMDE for calibration	40
A30	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	40
E198	Initiate technical order improvement reports	40
B81	Supervise PMEL Journeymen (AFSC 2P051)	40
F263	Perform acceptance or receiving inspections of incoming TMDE	40
C88	Conduct self-assessments or self-inspections	40
F247	Inventory CTKs	40
F245	Inspect consolidated tool kits (CTKs)	40
F264	Perform operator maintenance on unit vehicles	20
F230	Coordinate technical assistance requirements with AGMC, manufacturers, or other PMELs	20
F252	Maintain CTKs	20
F249	Issue or log turn-ins of CTKs	20
C115	Inspect personnel for compliance with military standards	20
E212	Perform TCTO or modification inspections	20
D134	Conduct on-the-job training (OJT)	20
C123	Write EPRs	20
I330	Restore PAMS data files	20
C87	Conduct safety inspections of facilities or equipment	20
I328	Print or write PAMS reports	20

TABLE A14

PRODUCTION CONTROL CLUSTER
Number of Members: 13 STG057

TASKS		PERCENT MEMBERS PERFORMING
H305	Distribute TMDE reports or listings	100
H303	Perform PMEL automated management subsystem (PAMS) part number or data item inquiries for initial calibrations	85
H308	Verify status of incoming TMDE, including documentation and condition	85
F269	Schedule TMDE for calibration	77
H299	Maintain TMDE calibration forecast listings and schedules	77
H300	Maintain TMDE coordinator control books, logs, or appointment letters	69
H292	Coordinate return of completed TMDE with appropriate agencies or OWCs	69
H306	Schedule critical or identical TMDE to prevent adverse mission impact	69
F257	Maintain precision measurement equipment (PME) calibration schedules	69
H307	Track equipment shipped for calibration or repair	69
H301	Maintain transportation control number (TCN) logs	54
F263	Perform acceptance or receiving inspections of incoming TMDE	54
H293	Draft or write TMDE overdue letters	54
D137	Conduct TMDE coordinator training	54
H304	Plan or schedule on-site calibrations	46
H297	Maintain electronic data processing (EDP) master TMDE inventory and monthly scheduling reports	46
J350	Inspect TMDE for loose or foreign objects	46
D131	Certify TMDE coordinator training	46
F267	Research supply requisition data, such as supply catalogs or federal logistics (FEDLOG)	46
F221	Attach or annotate equipment status labels or tags, such as DD Forms 1574 (Serviceable Tag-Materiel)	46
A30	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	46
H298	Maintain maintenance data collection (MDC) master identification (ID) listings	38

TABLE A15

PMEL AUTOMATED MAINTENANCE SUBSYSTEM JOB
Number of Members: 12 STG218

TASKS		PERCENT MEMBERS PERFORMING
I328	Print or write PAMS reports	100
I323	Perform operator maintenance on PAMS equipment	100
I320	Maintain PAMS data bases	100
I333	Update PAMS program files	100
I309	Assign PAMS passwords	100
I314	Edit PAMS user files	100
I315	Establish PAMS user files	100
I321	Maintain PAMS password logs	100
I318	Install PAMS spooler files	100
I317	Install PAMS software revisions	100
I332	Troubleshoot PAMS hardware or software	92
I324	Perform PAMS daily, weekly, or monthly backups	92
I322	Maintain PAMS tape backup libraries	92
I319	Load or update PAMS personnel data files	92
I311	Conduct PAMS in-house training	92
I310	Assign spooler tasks to specific PAMS terminals	92
I330	Restore PAMS data files	92
I326	Perform preventive maintenance on PAMS system hardware	83
I316	Initiate PAMS program change requests	75
I329	Purge PAMS data files	75
I327	Plan PAMS in-house training	75
I312	Create PAMS program files	67
I325	Perform PAMS TFCU downloads or uploads	58
I331	Transfer MDC transaction files to MDC system	50
I313	Discharge PAMS uninterruptible power supplies	50
F267	Research supply requisition data, such as supply catalogs or federal logistics (FEDLOG)	42
E179	Compile information for records, reports, or logs	33
B71	Initiate semiannual or monthly PMEL reports	33
A30	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	33
C86	Conduct performance feedback evaluation sessions	33
G286	Perform in-process reviews (IPRs) of PMEL processes	25

APPENDIX B

LISTING OF TASK MODULES AND TASK STATEMENTS

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These Task Modules (TMs) were developed in order to organize and summarize the extensive task information for this specialty. The TMs were developed by clustering tasks which are coperformed by the same incumbents. Coperformance is a measure of how probable a task will be performed with another task, based upon the responses of surveyed personnel. For example, if an individual performs tasks on one piece of microwave equipment, the probability is very high that he or she will perform tasks on other pieces of microwave equipment as well. Thus, the group of microwave tasks can be considered a "natural group" of associated or related tasks (see TM 0019 below). The statistical clustering generally approximates these "natural groupings."

The title of each TM is a best estimate as to the generic subject content of the group of tasks. The TMs are useful for organizing the task data into meaningful units and as a way to concisely summarize the extensive job data. However, TMs are only one way to organize the information. Other strategies may also be valid.

0001	ST0912	Basic Maintenance
1	J336	Clean TMDE or components using chemicals
2	J339	Clean, treat, or replace filters
3	J347	Inspect or replace common electrical hardware, such as power plugs or fuses
4	J348	Inspect or replace common nonelectrical hardware, such as knobs, screws, feet, or cases
5	J349	Inspect, clean, or replace batteries
6	J350	Inspect TMDE for loose or foreign objects
7	J351	Perform calculations using scientific calculators
8	J361	Solder or desolder discrete circuit components, such as resistors or ESDs, on single-layer circuit boards
9	K373	Compute limited certification values or ranges

0002	ST0574	Calculations and Analysis
1	K367	Calculate age or drift rates
2	K368	Calculate current, voltage, impedance, reactance, resistance, capacitance, or power parameters
3	K381	Convert between logarithmic and linear power levels, such as dBm or milliwatts
4	K385	Convert between time and frequencies
5	K389	Perform analyses of basic AC circuits
6	K390	Perform analyses of basic DC circuits
7	K391	Perform analyses of integrated circuit (IC) boards
8	K392	Perform analyses of microwave measurements, such as power, attenuation, or voltage standing wave ratios
9	K395	Perform analyses of signals using frequency-domain TMDE
10	K396	Perform analyses of signals using time-domain TMDE
11	K397	Perform analyses of solid-state circuits

0003	ST0391	Deficiency Reports and Supply Requisitions
1	E198	Initiate technical order improvement reports
2	F221	Attach or annotate equipment status labels or tags, such as DD Forms 1574 (Serviceable Tag-Materiel)
3	F222	Certify status of reparable, serviceable, or condemned parts or TMDE
4	F267	Research supply requisition data, such as supply catalogs or federal logistics (FEDLOG)
5	F268	Research technical orders to identify components or items of equipment

0004	ST0333	Fabrication
1	J340	Construct cables or terminations affecting calibrations
2	J341	Design or fabricate specialized TMDE test devices, such as loads, adapters, or test fixtures
3	J360	Set up electrostatic sensitive device (ESD) stations

0005	ST1156	Torque Wrenches
1	P799	Troubleshoot or repair torque wrenches
2	P800	Calibrate or align torque wrenches

0006	ST0687	Mathematical Conversions
1	K380	Convert between degrees, minutes, or seconds
2	K383	Convert between Metric and English measures
3	K384	Convert between temperature scales, such as Fahrenheit, Celsius, Kelvin, or Rankine

0008	ST0760	Sampling Units
1	N583	Troubleshoot or repair sampling sweep units
2	N584	Calibrate or align sampling sweep units
3	N585	Troubleshoot or repair sampling heads
4	N586	Calibrate or align sampling heads

0009	ST0984	Miscellaneous Equipment
1	J334	Troubleshoot or repair miscellaneous equipment, other than TMDE, such as radar speed guns
2	J335	Calibrate or align miscellaneous equipment, other than TMDE, such as radar speed guns

0011	ST0297	Hazardous Material Handling
1	J346	Initiate action for cleanup of hazardous spills
2	J364	Store or dispose of hazardous waste materials

0012	ST0336	New Equipment
1	C114	Inspect new equipment
2	F243	Evaluate serviceability of equipment, tools, or supplies
3	F246	Inspect equipment, tools, or supplies, other than CTKs or incoming equipment

0013	ST0648	Calibrating Frequency Generating & Analyzing Equipment
1	M470	Calibrate or align constant amplitude generators
2	M479	Troubleshoot or repair electronic counters or plug-in units (PIUs)
3	M480	Calibrate or align electronic counters or PIUs
4	M482	Calibrate or align fast rise-time generators
5	M498	Calibrate or align function generators
6	M518	Calibrate or align pulse generators
7	M524	Calibrate or align RF signal generators
8	M532	Calibrate or align synthesized signal generators
9	M538	Calibrate or align time-mark generators
10	N552	Troubleshoot or repair analog oscilloscopes
11	N553	Calibrate or align analog oscilloscopes
12	N555	Calibrate or align digital oscilloscopes, other than DPOs
13	N563	Calibrate or align distortion analyzers

0014	ST0678	Specialized Meters
1	L418	Troubleshoot or repair clamp-on voltammeters
2	L434	Troubleshoot or repair megohmmeters
3	L435	Calibrate or align megohmmeters
4	L436	Troubleshoot or repair ohmmeters

0015	ST0609	Troubleshooting Frequency Generating & Analyzing Equipment
1	M461	Troubleshoot or repair audio frequency oscillators
2	M462	Calibrate or align audio frequency oscillators
3	M469	Troubleshoot or repair constant amplitude generators
4	M481	Troubleshoot or repair fast rise-time generators
5	M497	Troubleshoot or repair function generators
6	M517	Troubleshoot or repair pulse generators
7	M523	Troubleshoot or repair RF signal generators
8	M527	Troubleshoot or repair square wave generators
9	M528	Calibrate or align square wave generators
10	M531	Troubleshoot or repair synthesized signal generators
11	M537	Troubleshoot or repair time-mark generators
12	N562	Troubleshoot or repair distortion analyzers

0016	ST0631	Phase-angle TMDE
1	S929	Calibrate or align phase-angle generators
2	S931	Calibrate or align phase-angle standards
3	S932	Troubleshoot or repair phase-angle voltmeters
4	S933	Calibrate or align phase-angle voltmeters

0017	ST0632	Plug-in Units
1	N564	Troubleshoot or repair differential PIUs
2	N565	Calibrate or align differential PIUs
3	N566	Troubleshoot or repair time base PIUs
4	N567	Calibrate or align time base PIUs
5	N570	Troubleshoot or repair vertical PIUs
6	N571	Calibrate or align vertical PIUs
7	N572	Troubleshoot or repair oscilloscope calibration fixture PIUs
8	N573	Calibrate or align oscilloscope calibration fixture PIUs

0018	ST0681	AC/DC Electrical Measurement Standards
1	S874	Troubleshoot or repair AC ratio standards
2	S878	Troubleshoot or repair AC/DC generator/detectors
3	S882	Troubleshoot or repair AC/DC transfer standards
4	S883	Calibrate or align AC/DC transfer standards
5	S884	Troubleshoot or repair AC voltage dividers
6	S886	Troubleshoot or repair DC voltage dividers

0019	ST0588	Microwave Equipment
1	O598	Calibrate or align attenuator calibrators
2	O600	Calibrate or align bolometer or thermistor mounts
3	O604	Calibrate or align coaxial-directional couplers
4	O607	Calibrate or align coaxial attenuators
5	O611	Calibrate or align decade attenuators
6	O616	Troubleshoot or repair microwave frequency counters, such as continuous wave or pulse
7	O617	Calibrate or align microwave frequency counters, such as continuous wave or pulse
8	O621	Calibrate or align microwave signal generators
9	O633	Calibrate or align power sensors
10	O639	Calibrate or align swept-frequency generators

0020	ST0291	AC/DC Electrical Measurement TMDE
1	L449	Troubleshoot or repair synchros or resolvers
2	L450	Calibrate or align synchros or resolvers
3	S874	Troubleshoot or repair AC ratio standards
4	S875	Calibrate or align AC ratio standards
5	S876	Troubleshoot or repair AC voltage standards

6	S877	Calibrate or align AC voltage standards
7	S878	Troubleshoot or repair AC/DC generator/detectors
8	S879	Calibrate or align AC/DC generator/detectors
9	S880	Troubleshoot or repair AC/DC instrument calibrators
10	S881	Calibrate or align AC/DC instrument calibrators
11	S882	Troubleshoot or repair AC/DC transfer standards
12	S883	Calibrate or align AC/DC transfer standards
13	S884	Troubleshoot or repair AC voltage dividers
14	S885	Calibrate or align AC voltage dividers
15	S886	Troubleshoot or repair DC voltage dividers
16	S887	Calibrate or align DC voltage dividers
17	S888	Troubleshoot or repair DC voltage standards
18	S889	Calibrate or align DC voltage standards
19	S892	Troubleshoot or repair capacitance bridges
20	S893	Calibrate or align capacitance bridges
21	S894	Troubleshoot or repair capacitive voltage dividers
22	S895	Calibrate or align capacitive voltage dividers
23	S896	Troubleshoot or repair capacitance standards
24	S897	Calibrate or align capacitance standards
25	S898	Troubleshoot or repair current shunts
26	S899	Calibrate or align current shunts
27	S900	Troubleshoot or repair current standards
28	S901	Calibrate or align current standards
29	S902	Troubleshoot or repair decade capacitors
30	S903	Calibrate or align decade capacitors
31	S904	Troubleshoot or repair decade inductors
32	S905	Calibrate or align decade inductors
33	S906	Troubleshoot or repair decade resistors
34	S907	Calibrate or align decade resistors
35	S908	Troubleshoot or repair decade or ratio transformers
36	S909	Calibrate or align decade or ratio transformers
37	S910	Troubleshoot or repair decade voltage dividers
38	S911	Calibrate or align decade voltage dividers
39	S918	Troubleshoot or repair fuel conductivity test sets
40	S919	Calibrate or align fuel conductivity test sets
41	S920	Troubleshoot or repair high-voltage/hi-meg resistors
42	S921	Calibrate or align high-voltage/hi-meg resistors
43	S922	Troubleshoot or repair impedance bridges
44	S923	Calibrate or align impedance bridges
45	S924	Troubleshoot or repair standard resistors, other than current shunts
46	S925	Calibrate or align standard resistors, other than current shunts
47	S926	Troubleshoot or repair null detectors
48	S927	Calibrate or align null detectors
49	S928	Troubleshoot or repair phase-angle generators
50	S929	Calibrate or align phase-angle generators
51	S930	Troubleshoot or repair phase-angle standards

0020	ST0291	AC/DC Electrical Measurement TMDE (Continued)
52	S931	Calibrate or align phase-angle standards
53	S932	Troubleshoot or repair phase-angle voltmeters
54	S933	Calibrate or align phase-angle voltmeters
55	S934	Troubleshoot or repair power or resistance bridges
56	S935	Calibrate or align power or resistance bridges
57	S936	Troubleshoot or repair Kelvin-ratio bridges
58	S937	Calibrate or align Kelvin-ratio bridges
59	S938	Troubleshoot or repair standard cell enclosures
60	S939	Calibrate or align standard cell enclosures
61	S940	Calibrate or align standard cells
62	S941	Troubleshoot or repair synchro/resolver test sets
63	S942	Calibrate or align synchro/resolver test sets
64	S945	Troubleshoot or repair thermal voltmeters
65	S946	Calibrate or align thermal voltmeters
66	S947	Troubleshoot or repair transconductance amplifiers
67	S948	Calibrate or align transconductance amplifiers
68	S949	Calibrate or align inductance standards
69	U1006	Troubleshoot or repair fuel quantity test sets

0022	ST0557	F-16 Unique Equipment
1	X1193	Troubleshoot or repair chaff/flares dispenser test sets, such as AN/ALM-177-series
2	X1194	Calibrate or align chaff/flares dispenser test sets, such as AN/ALM-177-series
3	X1195	Troubleshoot or repair emergency power units (EPUs), such as 912476-series
4	X1196	Calibrate or align EPUs, such as 912476-series
5	X1203	Troubleshoot or repair preload armament circuit test sets, such as 16U75060-series
6	X1204	Calibrate or align preload armament circuit test sets, such as 16U75060-series
7	X1205	Troubleshoot or repair STORES management systems (SMSs), such as 16U75501-series
8	X1206	Calibrate or align SMSs, such as 16U75501-series
9	X1207	Troubleshoot or repair SMSs breakout boxes, such as 16UE75517-series
10	X1208	Calibrate or align SMSs breakout boxes, such as 16UE75517-series
11	X1209	Troubleshoot or repair STORES release equipment (SRE), such as 16U75500-series
12	X1210	Calibrate or align SRE, such as 16U75500-series
13	X1211	Troubleshoot or repair electrical engine test sets
14	X1212	Calibrate or align electrical engine test sets
15	X1221	Troubleshoot or repair engine warning test sets
16	X1222	Calibrate or align engine warning test sets

0029	ST0627	TACAN, IFF, & ILS/VOR Equipment
1	U1008	Troubleshoot or repair identification friend or foe (IFF) or selective identification feature (SIF) transponder test sets
2	U1009	Calibrate or align IFF or SIF transponder test sets
3	U1016	Troubleshoot or repair instrument landing system/variable omnirange (ILS/VOR) test equipment

0029	ST0627	TACAN, IFF, & ILS/VOR Equipment (Continued)
4	U1017	Calibrate or align ILS/VOR test equipment
5	U1047	Troubleshoot or repair tactical air navigation (TACAN) related test equipment, other than navigational test sets
6	U1048	Calibrate or align TACAN related test equipment, other than navigational test sets

0030	ST0646	Physical and Dimensional Equipment
1	P663	Troubleshoot or repair aircraft weighing kits
2	P664	Calibrate or align aircraft weighing kits
3	P690	Troubleshoot or repair combustible or toxic gas analyzers or alarms
4	P691	Calibrate or align combustible or toxic gas analyzers or alarms
5	P692	Troubleshoot or repair dead-weight testers
6	P693	Calibrate or align dead-weight testers
7	P698	Troubleshoot or repair dial indicators
8	P699	Calibrate or align dial indicators
9	P701	Calibrate or align dial thermometers
10	P703	Calibrate or align digital thermometers
11	P711	Calibrate or align electrical tachometers
12	P716	Troubleshoot or repair electronic scales
13	P717	Calibrate or align electronic scales
14	P725	Calibrate or align force gauges
15	P732	Troubleshoot or repair humidigraphs or hygrothermographs
16	P733	Calibrate or align humidigraphs or hygrothermographs
17	P744	Troubleshoot or repair mechanical scales
18	P745	Calibrate or align mechanical scales
19	P747	Calibrate or align mechanical tachometers
20	P748	Troubleshoot or repair micrometers, other than optical micrometers
21	P749	Calibrate or align micrometers, other than optical micrometers
22	P772	Troubleshoot or repair push-pull gauges
23	P773	Calibrate or align push-pull gauges
24	P802	Calibrate or align vernier calipers

0031	ST0085	Mobile Calibrations
1	F264	Perform operator maintenance on unit vehicles
2	F266	Prepare for transportable field calibration units (TFCUs) or special calibration TDYs
3	F273	Transport personnel or equipment to or from work locations for on-site calibrations or maintenance

0032	ST0490	Voltage, Current, and Resistance Meters
1	L406	Troubleshoot or repair AC/DC analog ammeters
2	L407	Calibrate or align AC/DC analog ammeters
3	L408	Troubleshoot or repair analog passive multimeters or accessories
4	L409	Calibrate or align analog passive multimeters or accessories
5	L410	Troubleshoot or repair analog active voltmeters

0032	ST0490	Voltage, Current, and Resistance Meters (Continued)
6	L411	Calibrate or align analog active voltmeters
7	L412	Troubleshoot or repair AC/DC analog voltmeters
8	L413	Calibrate or align AC/DC analog voltmeters
9	L419	Calibrate or align clamp-on voltammeters
10	L433	Calibrate or align power meters
11	L437	Calibrate or align ohmmeters
12	L442	Troubleshoot or repair power supplies
13	L443	Calibrate or align power supplies
14	L444	Troubleshoot or repair RF millivoltmeters
15	L445	Calibrate or align RF millivoltmeters
16	L453	Calibrate or align voltage probes
17	S912	Troubleshoot or repair differential voltmeters
18	S913	Calibrate or align differential voltmeters
19	S914	Troubleshoot or repair digital multimeters, other than low-accuracy or test station digital multimeters
20	S915	Calibrate or align digital multimeters, other than low-accuracy or test station digital multimeters
21	S916	Troubleshoot or repair low-accuracy digital multimeters
22	S917	Calibrate or align low-accuracy digital multimeters

0033	ST0737	Oxygen TMDE
1	P754	Troubleshoot or repair oxygen gauges, other than LOX gauges
2	P755	Calibrate or align oxygen gauges, other than LOX gauges
3	P756	Troubleshoot or repair LOX gauges
4	P757	Calibrate or align LOX gauges
5	P820	Clean or inspect oxygen equipment

0034	ST0706	Jetcal & Altitude/Airspeed Equipment
1	U998	Troubleshoot or repair engine trim boxes or jetcal test sets
2	U999	Calibrate or align engine trim boxes or jetcal test sets
3	U1035	Troubleshoot or repair pressure temperature test sets, such as altitude and airspeed test sets
4	U1036	Calibrate or align pressure temperature test sets, such as altitude and airspeed test sets

0045	ST0547	Direct Supervision
1	A24	Establish performance standards for subordinates
2	B49	Counsel subordinates concerning personal matters
3	B73	Interpret policies, directives, or procedures for subordinates
4	B81	Supervise PMEL Journeymen (AFSC 2P051)
5	B82	Supervise PMEL Craftsmen (AFSC 2P071)
6	C86	Conduct performance feedback evaluation sessions
7	C103	Evaluate personnel for compliance with performance standards
8	C104	Evaluate personnel for promotion, demotion, reclassification, or special awards

0045	ST0547	Direct Supervision (Continued)
9	C105	Evaluate PMEL maintenance procedures
10	C115	Inspect personnel for compliance with military standards
11	C123	Write EPRs
12	C125	Write recommendations for awards or decorations

0048	ST0405	On-the-Job Training
1	D143	Determine OJT requirements
2	D149	Develop in-house training programs
3	D158	Evaluate effectiveness of training programs
4	D160	Evaluate personnel to determine training needs
5	D162	Evaluate training methods and techniques
6	D164	Implement training programs
7	D165	Identify OJT trainers or certifiers
8	D166	Identify or schedule personnel for upgrade or specialized training classes
9	D169	Plan or schedule training, such as OJT, proficiency training, orientation training, or ancillary training

0049	ST0634	Scheduling
1	A1	Assign personnel to work areas or duty positions
2	A28	Establish work schedules
3	A41	Schedule personnel for temporary duty (TDY) assignments, leaves, or passes
4	B48	Conduct supervisory orientations for newly assigned personnel
5	B66	Implement work methods, controls, or procedures
6	B67	Initiate actions required due to substandard performance of personnel
7	C84	Analyze workload requirements
8	C111	Evaluate work schedules

0050	ST0196	Supervision
1	A2	Assign sponsors for newly assigned personnel
2	A3	Coordinate host-tenant or interservice agreements with appropriate agencies
3	A5	Determine logistics requirements, such as personnel, equipment, space, or supplies
4	A9	Develop cost-reduction programs
5	A10	Develop inputs to mobility, contingency, disaster preparedness, or unit emergency or alert plans
6	A11	Develop organizational or functional charts
7	A12	Develop precision measurement equipment laboratory (PMEL) directives, such as wing or base regulations
8	A13	Develop resource protection programs
9	A14	Develop self-assessment guides
10	A16	Draft budget requirements
11	A18	Draft or write agenda for general meetings, such as staff meetings, briefings, conferences, or workshops
12	A20	Establish administrative files

0050	ST0196	Supervision (Continued)
13	A23	Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)
14	A25	Establish procedures for accountability of equipment, tools, or supplies
15	A27	Establish suspense systems
16	A31	Plan briefings, conferences, or workshops
17	A33	Plan facility or equipment maintenance requirements
18	A34	Plan layouts of facilities
19	A37	Plan personnel or equipment deployments
20	A39	Plan self-assessment guides
21	A40	Review drafts of regulations, manuals, or other directives
22	A42	Schedule staff assistance visits, inspections, or audits
23	A43	Write job or position descriptions
24	B46	Annotate time and attendance sheets for civilian employees
25	B47	Conduct general staff meetings or briefings
26	B50	Direct development or maintenance of status indicators, such as boards, graphs, or charts
27	B51	Direct inventories of TMDE
28	B53	Draft recommendations for policy changes in logistic requirements, such as personnel, equipment, space, or supplies
29	B57	Implement cost-reduction programs
30	B60	Implement inspection programs or procedures
31	B71	Initiate semiannual or monthly PMEL reports
32	B78	Supervise civilian employees
33	B79	Supervise military personnel with AFSCs other than AFSC 2P0X1
34	C89	Conduct staff assistance visits, inspections, or audits
35	C91	Evaluate administrative forms, files, or procedures
36	C92	Evaluate budget requirements
37	C96	Evaluate inspection report findings or inspection procedures
38	C98	Evaluate job or position descriptions
39	C99	Evaluate layouts of facilities
40	C100	Evaluate logistics requirements, such as personnel, equipment, space, tools, or supplies
41	C106	Evaluate procedures for storage, inventory, or inspection of property items
42	C108	Evaluate safety or security programs, other than AFOSH
43	C109	Evaluate suggestions
44	C112	Indorse civilian performance appraisals
45	C113	Indorse enlisted performance reports (EPRs)
46	C122	Write civilian performance appraisals
47	C126	Write replies to inspection reports
48	C127	Write staff studies, surveys, or special reports, other than training reports
49	E179	Compile information for records, reports, or logs
50	E180	Compile statistics on trend analyses
51	E193	Draft or write standby rosters or workcenter pyramid recall rosters
52	E200	Maintain administrative files

0052	ST0669	Quality Assurance
1	G280	Evaluate technical order improvement reports
2	G283	Interpret TMDE calibration procedures for PMEL technicians or OWCs
3	G286	Perform in-process reviews (IPRs) of PMEL processes
4	G288	Perform TMDE quality process reviews (QPRs)
5	G289	Perform working standards reviews (WSRs)

0054	ST0595	Production Control
1	H292	Coordinate return of completed TMDE with appropriate agencies or OWCs
2	H299	Maintain TMDE calibration forecast listings and schedules
3	H300	Maintain TMDE coordinator control books, logs, or appointment letters
4	H305	Distribute TMDE reports or listings
5	H306	Schedule critical or identical TMDE to prevent adverse mission impact

0055	ST0058	Supply
1	A35	Plan or implement TMDE awaiting parts (AWP) programs
2	F225	Coordinate deficiency, service, or status reports, such as RODs, with appropriate agencies
3	F226	Coordinate local purchase of equipment or supplies with appropriate agencies
4	F227	Coordinate logistics matters with appropriate agencies
5	F229	Coordinate requisition of equipment with appropriate agencies, such as OWCs
6	F231	Coordinate turn-in of excess or surplus property with base or other agencies
7	F233	Develop equipment checklists
8	F234	Draft or write equipment authorization lists
9	F235	Draft or write initial issue or bypass letters for repair cycle turn-ins
10	F236	Draft or write letters of justification for supply-related matters
11	F237	Draft or write reports of surveys
12	F238	Draft or write requisitions for equipment, tools, or supplies, other than for local purchase
13	F242	Evaluate changes in equipment allowances or authorizations
14	F244	Identify problem areas using deficiency, service, or status reports, such as RODs
15	F248	Inventory equipment, tools, or supplies, other than CTKs
16	F250	Issue or log turn-ins of equipment, tools, or supplies, other than CTKs
17	F254	Maintain due-in-from maintenance (DIFM) transaction rosters
18	F255	Maintain equipment control listings (ECLs)
19	F256	Maintain organizational equipment or supply records
20	F258	Maintain property custodian authorization/custody receipt listings (CA/CRLs)
21	F259	Maintain special purpose recoverables authorized maintenance (SPRAM) asset accounts
22	F262	Pack or unpack special tools or equipment
23	F265	Pick up or deliver equipment, supplies, or tools from or to support points
24	F270	Screen defense reutilization and marketing office (DRMO) property
25	F272	Store equipment, tools, or supplies

0055	ST0058	Supply (Continued)
26	F274	Validate DIFM transactions
27	F275	Validate supply transaction listings or rosters, such as D-04, D-18, or M-30
28	F276	Verify mission capability (MICAP) conditions

0056	ST0498	PAMS
1	I309	Assign PAMS passwords
2	I310	Assign spooler tasks to specific PAMS terminals
3	I311	Conduct PAMS in-house training
4	I312	Create PAMS program files
5	I313	Discharge PAMS uninterruptible power supplies
6	I314	Edit PAMS user files
7	I315	Establish PAMS user files
8	I316	Initiate PAMS program change requests
9	I317	Install PAMS software revisions
10	I318	Install PAMS spooler files
11	I319	Load or update PAMS personnel data files
12	I320	Maintain PAMS data bases
13	I321	Maintain PAMS password logs
14	I322	Maintain PAMS tape backup libraries
15	I323	Perform operator maintenance on PAMS equipment
16	I324	Perform PAMS daily, weekly, or monthly backups
17	I325	Perform PAMS TFCU downloads or uploads
18	I326	Perform preventive maintenance on PAMS system hardware
19	I327	Plan PAMS in-house training
20	I328	Print or write PAMS reports
21	I329	Purge PAMS data files
22	I330	Restore PAMS data files
23	I331	Transfer MDC transaction files to MDC system
24	I332	Troubleshoot PAMS hardware or software
25	I333	Update PAMS program files

0057	ST0436	Technical Orders
1	E196	Establish technical order accounts
2	E202	Maintain automated technical order management system (ATOMS) accounts
3	E207	Maintain technical order distribution offices (TODOs)
4	E208	Maintain technical order libraries
5	E209	Maintain time compliance technical orders (TCTOs)
6	E219	Verify receipt of TCTO changes

0059	ST0593	Formal Training
1	D128	Administer or score tests
2	D139	Construct or develop training materials or aids
3	D140	Construct tests or examinations, other than for upgrade training

0059	ST0593	Formal Training (Continued)
4	D142	Design visual or graphic training aids
5	D148	Develop formal course curricula, plans of instructions (POIs), or specialty training standards (STSs)
6	D152	Develop lesson plans
7	D175	Write test questions

0060	ST0146	F-15 Unique Equipment
1	U1053	Troubleshoot or repair waveform digitizing equipment, other than sampling waveform digitizing systems (SWDSs) and DPOs
2	U1054	Calibrate or align waveform digitizing equipment, other than SWDSs and DPOs
3	V1063	Troubleshoot or repair control stick boost and pitch controller (CSBPC) test sets
4	V1064	Calibrate or align CSBPC test sets
5	V1065	Troubleshoot or repair digital synchro converters
6	V1066	Calibrate or align digital synchro converters
7	V1069	Troubleshoot or repair input/output simulators
8	V1070	Calibrate or align input/output simulators
9	V1075	Troubleshoot or repair microwave noise analyzers
10	V1076	Calibrate or align microwave noise analyzers
11	V1077	Troubleshoot or repair microwave synthesizer system units (MSSUs)
12	V1078	Calibrate or align MSSUs
13	V1079	Troubleshoot or repair modulated microwave sources, such as Watkins-Johnson
14	V1080	Calibrate or align modulated microwave sources, such as Watkins-Johnson
15	V1081	Troubleshoot or repair phase meters
16	V1082	Calibrate or align phase meters
17	V1083	Troubleshoot or repair power heads and RF power meters on station
18	V1084	Calibrate or align power heads and RF power meters on station
19	V1085	Troubleshoot or repair programmable ratio transformers (PRTs)
20	V1086	Calibrate or align PRTs
21	V1087	Troubleshoot or repair station programmable waveform generators
22	V1088	Calibrate or align station programmable waveform generators
23	V1089	Troubleshoot or repair programming boxes
24	V1090	Calibrate or align programming boxes
25	V1091	Troubleshoot or repair RF measurement/stimuli drawers
26	V1092	Calibrate or align RF measurement/stimuli drawers
27	V1093	Troubleshoot or repair SWDSs
28	V1094	Calibrate or align SWDSs
29	V1095	Troubleshoot or repair suppressed-carrier modulators
30	V1096	Calibrate or align suppressed-carrier modulators
31	V1099	Troubleshoot or repair transfer function analyzers (TFAs)
32	V1100	Calibrate or align TFAs
33	V1103	Troubleshoot or repair x-band signal sources (XBSSs)
34	V1104	Calibrate or align XBSSs
35	V1105	Troubleshoot or repair aircraft weapons control test sets, such as AE24T-169
36	V1106	Calibrate or align aircraft weapons control test sets, such as AE24T-169

37	V1107	Troubleshoot or repair missile launch pylon test sets or weapons firing circuit test sets, such as AE24T170
38	V1108	Calibrate or align missile launch pylon test sets or weapons firing circuit test sets, such as AE24T170
39	V1109	Troubleshoot or repair weapons firing test sets, such as 372-31A06G2621
40	V1110	Calibrate or align weapons firing test sets, such as 372-31A06G2621
41	V1111	Troubleshoot or repair intermediate frequency signal sources (IFSSs)
42	V1112	Calibrate or align IFSSs
43	V1113	Troubleshoot or repair countermeasure test sets, such as AN/ALM-231
44	V1114	Calibrate or align countermeasure test sets, such as AN/ALM-231
45	V1117	Troubleshoot or repair angle position indicators, such as 2129519 or 2129518
46	V1118	Calibrate or align angle position indicators, such as 2129519 or 2129518
47	V1119	Troubleshoot or repair test station AM/FM signal generators, such as 1993120
48	V1120	Calibrate or align test station AM/FM signal generators, such as 1993120
49	V1121	Troubleshoot or repair test station digital multimeters, such as 1993101
50	V1122	Calibrate or align test station digital multimeters, such as 1993101
51	V1123	Troubleshoot or repair test station frequency counters, such as 2129607 or 2129608
52	V1124	Calibrate or align test station frequency counters, such as 2129607 or 2129608
53	V1125	Troubleshoot or repair precision synchro signal converters, such as 3597141-0
54	V1126	Calibrate or align precision synchro signal converters, such as 3597141-0
55	V1127	Troubleshoot or repair pressure pneumatic generators, such as 3595000-0
56	V1128	Calibrate or align pressure pneumatic generators, such as 3595000-0
57	V1129	Troubleshoot or repair secondary power system test sets, such as 68D170009-1001
58	V1130	Calibrate or align secondary power system test sets, such as 68D170009-1001
59	V1131	Troubleshoot or repair avionics test station spectrum analyzers, such as 1993213 or 3598942
60	V1132	Calibrate or align avionics test station spectrum analyzers, such as 1993213 or 3598942
61	V1133	Troubleshoot or repair phase-noise measurement consoles, such as 3048A-E41
62	V1134	Calibrate or align phase-noise measurement consoles, such as 3048A-E41
63	V1135	Troubleshoot or repair digital processing oscilloscopes (DPOs)
64	V1136	Calibrate or align DPOs
65	V1141	Troubleshoot or repair walk-around transportable test sets (WATTSs)
66	V1142	Calibrate or align WATTSs
67	V1143	Troubleshoot or repair TEWS intermediate test stations (TISs)
68	V1144	Calibrate or align TISs
69	W1149	Troubleshoot or repair voltage detectors, such as A06G2621
70	W1150	Calibrate or align voltage detectors, such as A06G2621
71	W1151	Troubleshoot or repair RF power test sets, such as TS2059AWM18
72	W1152	Calibrate or align RF power test sets, such as TS2059AWM18
73	W1185	Troubleshoot or repair aircraft flight control systems, such as AN/ASM-497
74	W1186	Calibrate or align aircraft flight control systems, such as AN/ASM-497